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INSTALLATION RESTORATION PROGRAM PHASE 2

1/7

CONFIRMATION/QUANTIFICATION STAG (U)

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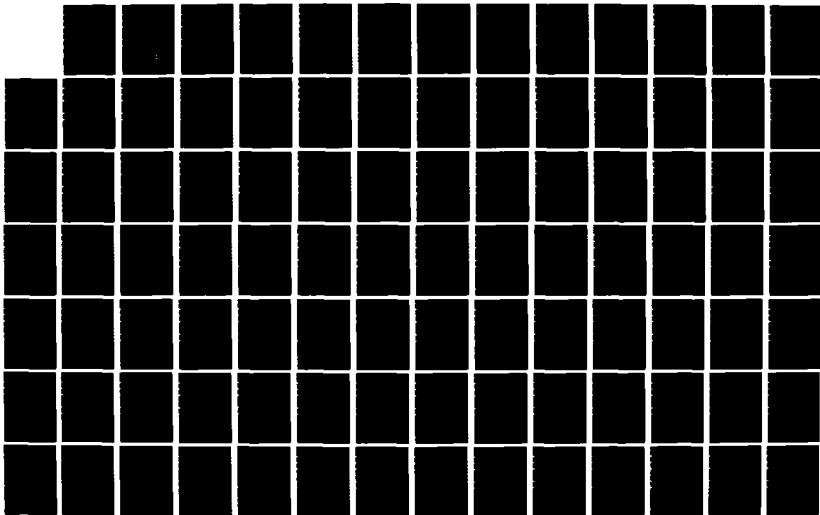
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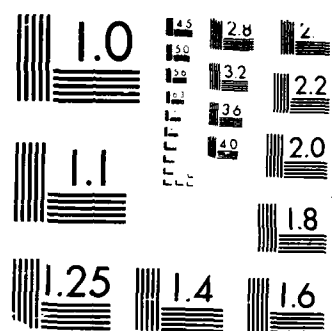
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**INSTALLATION RESTORATION PROGRAM  
PHASE II - CONFIRMATION/QUANTIFICATION  
STAGE 1**

VOLUME II

**U.S. AIR FORCE PLANT NO. 42  
Palmdale, California**

PREPARED FOR

HEADQUARTERS AERONAUTICAL SYSTEMS DIVISION  
FACILITIES MANAGEMENT DIVISION (ASD/PMDA)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-6503

AND

HEADQUARTERS AIR FORCE SYSTEMS COMMAND  
COMMAND BIOENVIRONMENTAL ENGINEER (AFSC/SGPB)  
ANDREWS AIR FORCE BASE, DIST. OF COLUMBIA 20334-5000

UNITED STATES AIR FORCE  
OCCUPATIONAL & ENVIRONMENTAL HEALTH LABORATORY  
TECHNICAL SERVICES DIVISION (USAFOEHL/TS)  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

APPROVED FOR PUBLIC RELEASE - DISTRIBUTION IS UNLIMITED

FEBRUARY 1987

FINAL REPORT

PREPARED BY

**ENGINEERING-SCIENCE, INC.**  
Pasadena, California 91103  
Atlanta, Georgia 30329

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ENGINEERING-SCIENCE

NOTICE

This report has been prepared for the United States Air Force by Engineering-Science, Inc. for the purpose of aiding in the implementation of the Air Force Installation Restoration Program. It is not an endorsement of any product. The views expressed herein are those of the contractor and do not necessarily reflect the official views of the publishing agency, the United States Air Force, or the Department of Defense.

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INSTALLATION RESTORATION PROGRAM  
PHASE II - CONFIRMATION/QUANTIFICATION  
STAGE 1

VOLUME II

Final Report  
For

U.S. AIR FORCE PLANT NO. 42  
Palmdale, California

Prepared For

HEADQUARTERS AERONAUTICAL SYSTEMS DIVISION  
FACILITIES MANAGEMENT DIVISION (ASD/PMDA)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-6503

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UNITED STATES AIR FORCE  
OCCUPATIONAL & ENVIRONMENTAL HEALTH LABORATORY  
TECHNICAL SERVICES DIVISION (USAFOEHL/TS)  
BROOKS AIR FORCE BASE, TEXAS 78235-5501



February 1987

Prepared By

ENGINEERING-SCIENCE, INC.  
75 North Fair Oaks Avenue  
Pasadena, California 91103

and

57 Executive Park South, Suite 590  
Atlanta, Georgia 30329

USAF CONTRACT NO. F33615-84-D-4403  
DELIVERY ORDER NO. 001102

USAFOEHL TECHNICAL PROGRAM MANAGER  
John K. Yu, Ph.D.

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# NOTICE

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SECURITY CLASSIFICATION OF THIS PAGE

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FIELD				
GROUP				
SUB-GROUP				
19 ABSTRACT (Continue on reverse if necessary and identify by block number) An Installation Restoration Program (IRP) Phase II, Stage 1 investigation was conducted at USAF Plant 42 in Palmdale, California, to confirm the presence or absence of contamination at 23 sites. Contamination was suspected at the sites as a result of past spills, leaks, or waste disposal practices. A field investigation program was conducted, consisting of soil boring and sampling, groundwater sampling, and chemical analysis of environmental samples (water and soils) for suspected contaminants. No significant contaminants were found at 17 of the sites. Fuel contamination (petroleum hydrocarbons or oil & grease) was detected at 5 sites, 3 of which also had volatile organics present. At 1 other site, no contamination was found, but other evidence suggested that contaminants might be present. No contamination was found in any groundwater samples; all contaminants detected were in the unsaturated zone. No further action was recommended for 17 sites where contamination was not found. Additional (IRP Phase II, Stage 2) investigations were recommended for 4 sites where the extent of contamination was not fully determined. Remedial action was recommended for 2 sites because of the location and amount of contaminants detected.				
20 DISTRIBUTION AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input checked="" type="checkbox"/> SAME AS RPT <input type="checkbox"/> ONC USERS			21 ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a NAME OF RESPONSIBLE INDIVIDUAL J. K. YU, Ph.D.			22b TELEPHONE (Include Area Code) (512) 536-2158	
			22c OFFICE SYMBOL USAF OHL/TSS	

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### VOLUME II

APPENDIX J - ANALYTICAL DATA REPORTS



## ANALYTICAL SERVICES

June 19, 1986

Engineering Science  
57 Executive Park South  
N.E. Suite 590  
Atlanta, GA 30329

Attn: Mark Guthrie

Quality assurance shall include at least the following parameters for the Metals Lab:

The calibration blank is prepared by diluting 2mL of (1+1) nitric acid and 10 mL of (1+1) HCl to 100mL with deionized, distilled water. Prepare a sufficient quantity to be used to flush the system between standards and samples.

The instrument check standard is prepared by the analyst by combining compatible elements at a concentration equivalent to the midpoint of their respective calibration curves.

At least once daily, the reagent blank must contain all the reagents and in the same volumes as used in the processing of the samples. The reagent blank must be carried through the complete procedure and contain the same acid concentration in the final solution as the sample solution used for analysis.

The quality control sample should be prepared in the same acid matrix as the calibration standards at a concentration near 1 mg/L and in accordance with the instructions provided by the supplier.

The lab analyzes an appropriate instrument check standard containing the elements of interest at a frequency of 10%. This check standard is used to determine instrument drift.

The calibration blank is run at a frequency of 10%. The result should be within the established control limits of two standard deviations of the three results. If the average is not within the control limit, terminate the analysis, correct the problem and recalibrate the instrument.

Regional Office

ITT Corporation • 7715 Fabrice Way • Suite D • Cerritos, California 90701 • 213-921-9831 • 714-523-9200

A quality control spike and duplicate spike is run on every job for Engineering Science. A known concentration of a specific parameter is added to an aliquot of sample. The spikes and duplicate spike recoveries measure the lab's ongoing accuracy.

A quality control sample from an outside source must first be used for the initial certification of the calibration standards. A fresh dilution of this sample shall be analyzed every week thereafter to monitor their stability. If the results are not within  $\pm 5\%$  of the true value listed for the control sample, prepare a new calibration standard and recalibrate the instrument. If this does not correct the problem, prepare a new stock standard and a new calibration standard and repeat the calibration.

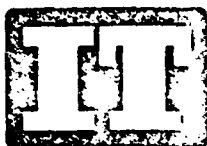
The ICAP runs (ERA) Environmental Resource Associates calibration standards as a daily routine. The ERA certified standards encompasses up to 1,000 ppb's and up to 10,000 ppb's for some metals. Percent recovery is calculated daily with these standards. The percent recovery is formulated to adjust analytical results and therefore yield more precise results.

The (APG) Analytical Products Group, Inc. has recently developed a P.E.T. program (Proficiency Environmental Testing). The Metals Lab will be receiving (starting 7-1-86) blind P.E. samples for analysis. These outside services will strengthen what is already good laboratory practices by confirming externally:

- 1) True values
- 2) Actual means (our lab and other participating labs)
- 3) Standard Deviations of participating labs
- 4) Average percent recovery
- 5) Our lab's deviation from the mean.

INTERNATIONAL TECHNOLOGY

  
Guy Sylvester  
QA/QC Coordinator



## ANALYTICAL SERVICES

June 24, 1986

Engineering Science  
57 Executive Park South, N.E.  
Suite 590  
Atlanta, GA 30329

Attn: Mark Guthrie

Re: ES Purchase Order 56394

Dear Mr. Guthrie:

A number of samples which were analyzed by SW 8010 Method under your P.O. #56394 show substantial concentrations of dichloromethane. At the time these samples were being analyzed, other work being done in the laboratory involved the use of dichloromethane. We believe the dichloromethane concentrations reported for these samples represent laboratory air contamination and should not be considered as being part of the samples. Laboratory procedures have been changed to minimize dichloromethane contamination in the future. The affected samples are listed below.

ITAS Job Number

ES Sample Number

35374

2-PWD2-SB2-SS2-2.5-ITC  
2-PWD2-SB2-SS5-10-ITC  
2-PWD2-SB2-SS10-30-ITC  
2-PWD2-SB2-SS14-50-ITC  
2-PWD2-SB3-SS2-2.5-ITC  
2-PWD2-SB3-SS5-10-ITC  
2-PWD2-SB3-SS10-30-ITC  
2-PWD2-SB3-SS14-50-ITC

35401

18-ADA2-SB1-SS5-10-ITC  
18-ADA2-SB1-SS8-20-ITC  
2-PWD2-SB5-SS5-10-ITC  
2-PWD2-SB5-SS10-30-ITC  
2-PWD2-SB5-SS14-50-ITC

Regional Office

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June 24, 1986

INTERNATIONAL TECHNOLOGY CORPORATION

page 2

ITAS Job Number

ES Sample Number

35288

4-VWT5-SB1-SS3-5-ITC  
4-VWT5-SB1-SS5-10-ITC  
4-VWT5-SB1-SS10-30-ITC  
4-VWT5-SB1-SS14-50-ITC

35303

4-VWT5-SB2-SS14-50-ITC  
4-VWT5-SB2-SS10-30-ITC  
4-VWT5-SB2-SS5-10-ITC

35393

2-PWD2-SB4-SS2-2.5-ITC  
2-PWD2-SB4-SS5-10-ITC  
2-PWD2-SB4-SS10-30-ITC  
2-PWD2-SB4-SS14-50-ITC

35812

5-AFTC-SB2-SS5-10-ITC  
5-AFTC-SB2-SS10-30-ITC  
5-AFTC-SB2-SS14-50-ITC

35328

6-OFTC-SB1-SS2-2.5-ITC  
6-OFTC-SB1-SS5-10-ITC  
6-OFTC-SB1-SS10-30-ITC  
6-OFTC-SB1-SS14-50-ITC  
7-ERA2-SB1-SS5-10-ITC  
7-ERA2-SB1-SS10-30-ITC  
7-ERA2-SB1-SS14-50-ITC

Please call if you have any questions concerning this matter.

INTERNATIONAL TECHNOLOGY



Jolene Cooper  
Assistant Q/A Coordinator





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

17605 Foothill Way • Cerritos, California 91701 • 313-921-9931 • 714-523-9200



## CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

Date: September 29, 1986

Attn: Dennis R. Kasper

Page 1 of 5

January 7, 1985

56394

35250/lac

### REVISED REPORT

Seven (7) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
17-NFTC-SB1-SS10-30-ITC	12-05-85	1500
17-NFTC-SB1-SS5-10-ITC	12-05-85	1500
17-NFTC-SB1-S15-10-ITC	12-05-85	1500
22-ERAT-SB2-SS4-10-ITC	12-05-85	1300
22-ERAT-SB1-SS4-10-ITC	12-05-85	0900
17-NFTC-SB2-SS2-2.5-ITC	12-06-85	0900
5-AFTC-SB1-SS2-2.5-ITC	12-06-85	1200

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to EPA Method 3550 and then analyzed for total recoverable oil and grease by EPA Method 413.2. The results are listed on the following page.

Data for Quality Control Report 8020-5 can be found in IT Job #35288. Data for Quality Control Report 8010-5 can be found in IT Job #35303.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

Sample: AF Plant 42 IRP-II ES Job 56394  
Date of Analysis: 12/13/85

<u>Sample</u>	<u>Total Oil and Grease(ug/g)</u>
17-NFTC-SB1-SS10-30'-ITC	2
17-NFTC-SB1-SS5-10'-ITC	ND<2
17-NFTC-SB1-S15-10'-ITC	ND<2
22-ERAT-SB2-SS4-10'-ITC	ND<2
22-ERAT-SB1-SS4-10'-ITC	4
17-NFTC-SB2-SS2-2.5'-ITC	ND<2
5-AFTC-SB1-SS2-2.5'-ITC	11,040
17-NFTC-SB1-SS10-30'-ITC Duplicate	3
17-NFTC-SB1-SS10-30'-ITC Spike	31
Spike Concentration	27

Percent Recovery: 106%

Relative Percent Difference: 40.0

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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Engineering Science  
Page 3

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35250-2  
Field Sample No. 5-AFTC-SB1-SS2-2.5-ITC  
Date Collected 12-6-85  
Date Received 12-7-85  
Date Analyzed 12-09-85  
QC Report No. 8010-5

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

5-AFTC-SB1-SS2-2.5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-11  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35250-2  
Field Sample No. 5-AFTC-SB1-SS2-2.5-ITC  
Date Collected 12-6-85  
Date Received 12-7-85  
Date Analyzed 12-9-85  
QC Report No. 8020-5

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor c 1:100  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.250	ND<0.250	ND<0.250	---	---	
Chlorobenzene	----	----	ND<0.250	---	---	*
1,2-Dichlorobenzene	----	----	ND<0.250	---	---	*
1,3-Dichlorobenzene	----	----	ND<0.250	---	---	*
1,4-Dichlorobenzene	----	----	ND<0.250	---	---	*
Ethyl benzene	0.250	4.9	1.7	7.48	3.03	
Toluene	0.250	10.0	9.4	4.90	2.1	C
Xylenes (Dimethyl benzene)	0.250	48.0	91	7.92	3.2	C
				8.12		
				8.75		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

\* See halogenated Volatile Organics report sheets.

c Large dilution due to matrix effects and for quantitation purposes.

C Confirm on second column.

**CERTIFICATE OF ANALYSIS**

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

Date: October 10, 1986

Attn: Dennis R. Kasper

Page 1 of 18

December 11, 1985

56394

35288/lac

REVISED REPORT

Four (4) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
4-VWT5-SB1-SS3-5-ITC	12-09-85	0900
4-VWT5-SB1-SS5-10-ITC	12-09-85	0900
4-VWT5-SB1-SS10-30-ITC	12-09-85	0900
4-VWT5-SB1-SS14-50-ITC	12-10-85	0900

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were digested with acid according to EPA Method 3050 and analyzed by AAS and ICP. The results are reported as Total Micrograms per gram and are listed in Table I. The Quality Control Data is listed in Table II.

The samples were also extracted according to EPA Method 3550 and then analyzed for total recoverable oil and grease by EPA Method 413.2. The results are listed in Table III and the Quality Control Data is listed in Table IV.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

Table I

	Micrograms/gram			
	4-VWT5-SB1- SS3-5'-ITC	4-VWT5-SB1- SS5-10'-ITC	4-VWT5-SB1- SS10-30'-ITC	4-VWT5-SB1- SS14-50'-ITC
Arsenic	ND<0.5	2.6	2.6	2.7
Barium	82	80	49	37
Cadmium	0.9	1.9	1.6	1.1
Total chromium	25	24	30	15
Lead	24	16	8	9
Mercury	0.02	0.03	ND<0.01	ND<0.01
Selenium	0.26	0.28	0.45	0.23
Silver	ND<0.3	ND<0.3	ND<0.3	ND<0.3

Date Analyzed: 12-16-85

Table II

Quality Control Data

	Micrograms/gram		Relative Percent Difference	Micrograms/gram		Percent Recovery
	4-VWT5-SB1- SS3-5'-ITC	4-VWT5-SB1- SS3-5'-ITC Dup		4-VWT5-SB1- SS3-5'-ITC Spike	Spike Amount	
Arsenic	ND<0.5	ND<0.5	--	2.8	0.95	240
Barium	82	78	5	210	47	270
Cadmium	0.9	2.5	94	5.9	4.7	106
Total chromium	25	25	0	36	9.5	116
Lead	24	16	40	57	47	70
Mercury	0.02	0.02	0	9.6	9.5	10.1
Selenium	0.26	0.16	48	0.17	0.095	0
Silver	ND<0.3	ND<0.3	--	3.5	47	7

Date Analyzed: 12-16-85

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



Table III

	<u>Total oil and grease</u>
	<u>Micrograms/gram</u>
4-VWT5-SB1-SS3-5'-ITC	350
4-VWT5-SB1-SS5-10'-ITC	6
4-VWT5-SB1-SS10-30'-ITC	ND<2
4-VWT5-SB1-SS14-50'-ITC	ND<2

Table IV

Quality Control Data

	<u>Total oil and grease</u>
	<u>Micrograms/gram</u>
4-VWT5-SB1-SS14-50'-ITC	ND<2
4-VWT5-SB1-SS14-50'-ITC Duplicate	ND<2
Relative Percent Difference: 0	
4-VWT5-SB1-SS14-50'-ITC Spike	16
Spike Amount	15
Percent Recovery: 94	
Date Analyzed: 12-30-85	

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35289014  
Field Sample No. 4-VWT5-SB1-SS3-5'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8010-5

## Sample Matrix:

☐ / Water (ug/L)☐ / Soil (ug/g)☐ / Other                                 Dilution Factor N/A\*Moisture                                 Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibutyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample Number: 4-VWT5-SB1-SS3-5'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.104	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288013  
Field Sample No. 4-VWT5-SB1-SS5-10'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8010-5

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chloronhexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample Number: 4-VWT5-SB1-SS5-10'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.058	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288022  
Field Sample No. 4-VWT5-SB1-SS10-30'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8010-5

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
1,1-dichloroethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample Number: 4-VWT5-SB1-SS10-30'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288012  
Field Sample No. 4-VWT5-SB1-SS14-50'-ITC  
Date Collected 12-10-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8010-5

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)etner	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample Number: 4-VWT5-SB1-SS14-50'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.055	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 4VWT5-SB1-SS5-10'-ITC

Duplicates 35288-7, 35288-8

Spike 35288-9

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/Kg)

☐ Other

Spike Source

QC Report No. 8020-5

Date Analyzed 12-18-85

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	0.005	0.060	94	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	0.005	0.045	80	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.103	0.005	0.077	75	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.102	0.005	0.079	77	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.088	0.005	0.065	75	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	0.005	0.045	83	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	0.005	0.032	57	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	---	0.005	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288-5  
Field Sample No. 4-VWT5-SB1-SS14-50' ITC  
Date Collected 12-10-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8020-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288-4  
Field Sample No. 4-VWT5-SB1-SS3-5'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8020-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288-6  
Field Sample No. 4-VWT5-SB1-SS10-30'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8020-5

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288-7  
Field Sample No. 4-VWT5-SB1-SS5-10' ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8020-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288-8 Duplicate  
Field Sample No. 4-VWT5-SB1-SS5-10'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8020-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 55394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35288-9 Spike  
Field Sample No. 4-VWT5-SB1-SS5-10'-ITC  
Date Collected 12-9-85  
Date Received 12-11-85  
Date Analyzed 12-18-85  
QC Report No. 8020-5

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.060	---	2.6	---	
Chlorobenzene	0.005	0.047	---	8.1	---	
1,2-Dichlorobenzene	0.005	0.077	---	14.7	---	
1,3-Dichlorobenzene	0.005	0.079	---	13.1	---	
1,4-Dichlorobenzene	0.005	0.066	---	12.9	---	
Ethyl benzene	0.005	0.045	---	7.5	---	
Toluene	0.005	0.032	---	4.9	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

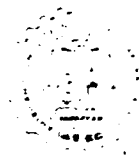
ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES



1700 S. Bascom Avenue • San Jose, California 95128 • (415) 251-1000 • Telex 152349 ITT

## CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

Date: October 7, 1986

Attn: Mark Guthrie

Page 1 of 18

December 12, 1985

56394

35303/lac

### CORRECTED REVISED REPORT

Three (3) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
4-VWT5-SB2-SS14-50-ITC	12-10-85	1500
4-VWT5-SB2-SS10-30-ITC	12-10-85	1200
4-VWT5-SB2-SS5-10-ITC	12-10-85	1200

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were digested with acid according to EPA Method 3050 and analyzed by Atomic Absorption Spectroscopy and Inductively Coupled Plasma. The results are reported as Total Micrograms per Gram and are listed in Table I. The Quality Control Data is listed in Table II.

Also, the samples were extracted according to EPA Method 3550 and then analyzed for total recoverable oil and grease by EPA Method 413.2. The results are listed in Table III and the Quality Control Data is listed in Table IV.

William P. Fassinger  
Chemist

Richard L. Merrell  
Laboratory Director

Table I

	Micrograms/gram			
	4-VWT5-SB2- SS14-50'-IIC	4-VWT5-SB2- SS10-30'-IIC	4-VWT5-SB2- SS5-10'-IIC	
Arsenic	2.7	2.5	2.7	
Barium	46	89	40	
Cadmium	1.2	2.0	0.9	
Total chromium	18	10	14	
Lead	9	11	7	
Mercury	ND<0.01	0.01	ND<0.01	
Selenium	ND<0.05	ND<0.05	ND<0.05	
Silver	ND<0.3	ND<0.3	ND<0.3	

Date Analyzed: 12-16-85

Table II

Quality Control Data

	Micrograms/gram		Micrograms/gram		
	4-VWT5-SB2- SS14-50'-IIC	4-VWT5-SB2- SS14-50'-IIC Dup	4-VWT5-SB2- SS14-50'-IIC	Spike Amount	Percent Recovery
Arsenic	2.7	2.4	2.8	0.97	10
Barium	46	48	93	49	96
Cadmium	1.2	1.4	0.99	4.9	0
Total chromium	18	16	31	9.7	134
Lead	9	9	41	49	98
Mercury	ND<0.01	ND<0.01	12	9.7	124
Selenium	ND<0.05	ND<0.05	ND<0.05	0.097	---
Silver	ND<0.3	ND<0.3	ND<0.3	49	0

Date Analyzed: 12-16-85

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Table III

	<u>Total oil and grease</u>
	<u>Micrograms/gram</u>
4-VWT5-SB2-SS14-50'-ITC	6
4-VWT5-SB2-SS10-30'-ITC	ND<2
4-VWT5-SB2-SS5-10'-ITC	12

Table IV

Quality Control Data

	<u>Total oil and grease</u>
	<u>Micrograms/gram</u>
4-VWT5-SB2-SS10-30'-ITC	ND<2
4-VWT5-SB2-SS10-30'-ITC Duplicate	ND<2
Relative Percent Difference: 0	
4-VWT5-SB2-SS10-30'-ITC Spike	46
Spike Amount	39
Percent Recovery: 118	
Date Analyzed: 01-02-86	

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

Engineering Science  
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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 4-VWT5-SB2-SS14-50'-ITC

QC Report No. 8010-5

Duplicates 35303-5, 35303-6

Date Analyzed 12-13-85

Spike 35303-7

Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)

Dilution Factor N/A

☒ Soil (ug/g)

\*Moisture %

☐ Other

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	FR	
Benzyl chloride	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bis(2-chloroisopropyl)ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bromobenzene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bromodichloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.053	106	
Bromofarm	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.070	140	
Bromomethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Carbon tetrachloride	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.041	82	
Chloroacetaldehyde	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloral	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chlorobenzene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.040	80	
Chloroethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloroform	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.043	86	
1-Chlorohexane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloromethyl methyl ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chlorotoluene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Dibromochloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.178	<0.010	0.188	106	

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB2-SS14-50'-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	-	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	-	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.041	82	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.051	102	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.037	74	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.046	92	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.059	118	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.042	84	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	-	0.178	<0.010	0.188	106	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.100	<0.010	0.092	92	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	-	--	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	-	0.100	<0.010	0.092	92	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.053	106	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	-	0.178	<0.010	0.188	106	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	-	0.050	<0.010	0.043	86	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	-	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	-	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	-	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35303-3  
Field Sample No. 4-VWT5-SB2-SS5-10'-ITC  
Date Collected 12-10-85  
Date Received 12-12-85  
Date Analyzed 12-13-85  
QC Report No. 8010-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB2-SS5-101-1

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35303-4  
Field Sample No. 4-VWT5-SB2-SS10-301-170  
Date Collected 12-10-85  
Date Received 12-12-85  
Date Analyzed 12-13-85  
QC Report No. 8010-5

## Sample Matrix:

       / Water (ug/L)

(X) / Soil (ug/g)

       / Other                                 

Dilution Factor N/A

\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoforn	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dichlorodichloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB2-SS10-30'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.012	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Lab Sample No. 35303-5Client Field Sample No. 4-VW75-SB2-SS14-SS15-770Project AF Plant 42Date Collected 12-10-85Client No. Date Received 12-12-85Laboratory Supervisor Approval: Date Analyzed 12-13-85QC Report No. 8010-5

Sample Matrix:

☐ Water (ug/L)Dilution Factor N/A☒ Soil (ug/g)\*Moisture ☐ Other Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB2-SG14-50'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35303-6 DUP.  
Field Sample No. 4-VWT5-SB2-SS14-50'-ITC  
Date Collected 12-10-85  
Date Received 12-12-85  
Date Analyzed 12-13-85  
QC Report No. 8010-5

Sample Matrix:

     / Water (ug/l)

  X   / Soil (ug/g)

     / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB2-SS14-50'-ITC DUP.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35303-7 SPIKE  
Field Sample No. 4-VWT5-SB2-GS14-60'-57'  
Date Collected 12-10-85  
Date Received 12-12-85  
Date Analyzed 12-13-85  
QC Report No. 8010-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.053	---	13.6	---	
Bromoform	0.010	0.070	---	19.0	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.041	---	13.1	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.040	---	23.6	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.043	---	10.8	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.186	---	16.3	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB2-SS14-50'-ITC SPIKE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.041	---	9.5	---	
1,2-Dichloroethane	0.010	0.051	---	11.5	---	
1,1-Dichloroethylene	0.010	0.037	---	8.4	---	
trans-1,2-dichloroethylene	0.010	0.046	---	10.3	---	
Dichloromethane	0.010	0.059	---	5.7	---	
1,2-Dichloropropane	0.010	0.042	---	14.9	---	
1,3-Dichloropropylene	0.010	0.188	---	16.3	---	
1,1,2,2-Tetrachloroethane	0.010	0.092	---	21.2	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.092	---	21.2	---	
1,1,1-Trichloroethane	0.010	0.053	---	12.7	---	
1,1,2-Trichloroethane	0.010	0.188	---	16.3	---	
Trichloroethylene	0.010	0.043	---	15.7	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35303-1

Field Sample No. 4-VWT5-SB2-SS10-30'-ITC

Date Collected 12-10-85

Date Received 12-12-85

Date Analyzed 12-13-85

QC Report No. 8020-5

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35303-2

Field Sample No. 4-VWT5-SB2-SS5-10'-ITC

Date Collected 12-10-85

Date Received 12-12-85

Date Analyzed 12-13-85

QC Report No. 8020-5

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35303-3  
Field Sample No. 4-VWT5-SB2-SS14-50'-ITC  
Date Collected 12-10-85  
Date Received 12-12-85  
Date Analyzed 12-13-85  
QC Report No. 8020-5

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

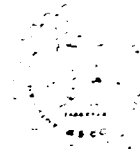
Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	
			---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES



### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O. Box 538  
Arcadia, CA 91006

October 7, 1986

Attn: Mark Guthrie

Page 1 of 20

December 13, 1985

Job #56394

35328/lac

#### REVISED REPORT

Seven (7) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
6-OFTC-SB1-SS2-2.5-ITC	12-11-85	1200
6-OFTC-SB1-SS5-10-ITC	12-11-85	1200
6-OFTC-SB1-SS10-30-ITC	12-11-85	1200
6-OFTC-SB1-SS14-50-ITC	12-12-85	1600
7-ERA2-SB1-SS5-10-ITC	12-12-85	1200
7-ERA2-SB1-SS10-30-ITC	12-12-85	1200
7-ERA2-SB1-SS14-50-ITC	12-12-85	1200

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

Also, the samples were extracted according to EPA Method 3550 and then several were analyzed for total recoverable oil and grease by EPA Method 413.2 and the remaining were analyzed for total recoverable petroleum hydrocarbons by EPA Method 418.1. The results are listed in Table I.

Data for Quality Control Report 8020-6 can be found with IT Job #35310.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director

It is noted that a number of samples covered in this report show substantial concentrations of dichloromethane. At the time these samples were being analyzed, other work being done in the laboratory involved the use of dichloromethane. We believe the dichloromethane concentrations reported for these samples represent laboratory air contamination and should not be considered as being part of the samples. Laboratory procedures have been changed to minimize dichloromethane contamination in the future.

Sample: AF Plant 42 IRP-IT ES Job 56394  
Date of Analysis: 01/03/86

<u>Sample</u>	<u>Total Oil and Grease(<math>\mu\text{g/g}</math>)</u>
6-OFTC-SB1-SS2-2.5'-ITC	15,600
6-OFTC-SB1-SS5-10'-ITC	1,500
6-OFTC-SB1-SS10-30'-ITC	20
6-OFTC-SB1-SS14-50'-ITC	ND<2

<u>Sample</u>	<u>Total Petroleum Hydrocarbons(<math>\mu\text{g/g}</math>)</u>
7-ERA2-SB1-SS5-10'-ITC	ND<2
7-ERA2-SB1-SS10-30'-ITC	9,420
7-ERA2-SB1-SS14-50'-ITC	670
7-ERA2-SB1-SS5-10'-ITC Duplicate	2
7-ERA2-SB1-SS5-10'-ITC Spike	19
Spike Concentration	17

Percent Recovery: +100%  
Relative Percent Differenc: N/A

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 6-OFTC SB-1 SS-14 50-ITC

Duplicates 35328-18, 35328-19

Spike 35328-21

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8010-7

Date Analyzed 12-18-85

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bis(2-chloroisopropyl)ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bromobenzene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Bromodichloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.043	86	
Bromoform	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.058	116	
Bromomethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Carbon tetrachloride	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.038	76	
Chloroacetaldehyde	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloral	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chlorobenzene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.038	76	
Chloroethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloroform	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.050	<0.010	0.048	96	
1-Chlorohexane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chloromethyl methyl ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Chlorotoluene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	---	<0.010	---	---	
Dibromochloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	-	0.178	<0.010	0.160	90	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC-SB1-SS14-50-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.047	94	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.050	100	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.031	62	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.040	80	
Dichloromethane	ND< 0.010	9.9	2.9	109	0.050	6.4	ND< 0.010	---	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.043	86	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.178	<0.010	0.160	90	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.075	75	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.075	75	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.032	64	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.178	<0.010	0.160	90	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.054	108	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35328-15  
Field Sample No. 6-OFTC-SB-1-SS-2-2.5' ITC  
Date Collected 12-11-85  
Date Received 12-13-85  
Date Analyzed 12-18-85  
QC Report No. 8010-7

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC SB-1 SS-2 2.5' 17C

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	2.610	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	0.190	---	15.8	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35328-17  
Field Sample No. 6-OFTC-SB1-SS10-30-ITC  
Date Collected 12-11-85  
Date Received 12-13-85  
Date Analyzed 12-18-85  
QC Report No. 8010-7

Sample Matrix: \_\_\_\_\_

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis-2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis-2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC SB-1 SS-10 30' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	5.660	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35328-16  
Field Sample No. 6-OFTC-SB1-SS5-10-170  
Date Collected 12-11-85  
Date Received 12-13-85  
Date Analyzed 12-18-85  
QC Report No. 8010-7

Sample Matrix: \_\_\_\_\_

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis-2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis-2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC SB-1 SS-5 10' 170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	6.650	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35328-18  
Field Sample No. 6-OFTC-SB1-SS14-50-ITC  
Date Collected 12-12-85  
Date Received 12-13-85  
Date Analyzed 12-18-85  
QC Report No. 8010-7

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis-2-Chloroethoxymethane	0.010	ND<0.010	---	---	---	
Bis-2-chloroisopropylether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC SB-1 SS-14 50' IVC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	9.900	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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Sample Matrix:

Dilution Factor                      N/A

\*Moisture 22

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis-2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis-2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC SB-1 SS-14 50' ITC DUP.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	2.870	---	5.7	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35228-21 SPIKE  
Field Sample No. 6-OFTC-SB1-SS14-50-ITC  
Date Collected 12-12-85  
Date Received 12-13-85  
Date Analyzed 12-18-85  
QC Report No. 8010-7

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	---	---	---	---	
Bis-2-Chloroethoxy)methane	0.010	---	---	---	---	
Bis-2-chloroisopropyl)ether	0.010	---	---	---	---	
Bromobenzene	0.010	---	---	---	---	
Bromodichloromethane	0.010	0.043	---	13.7	---	
Bromoform	0.010	0.058	---	18.8	---	
Bromomethane	0.010	---	---	---	---	
Carbon tetrachloride	0.010	0.036	---	13.1	---	
Chloroacetaldehyde	0.010	---	---	---	---	
Chloral	0.010	---	---	---	---	
Chlorobenzene	0.010	0.038	---	23.7	---	
Chloroethane	0.010	---	---	---	---	
Chloroform	0.010	0.048	---	10.8	---	
1-Chlorohexane	0.010	---	---	---	---	
2-Chloroethyl vinyl ether	0.010	---	---	---	---	
Chloromethane	0.010	---	---	---	---	
Chloromethyl methyl ether	0.010	---	---	---	---	
Chlorotoluene	0.010	---	---	---	---	
Dibromochloromethane	0.010	0.160	---	16.4	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

6-OFTC-SB1-SS14-50-ITC SPIRE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	---	---	---	---	
Dichlorodifluoromethane	0.010	---	---	---	---	
1,1-Dichloroethane	0.010	0.047	---	9.7	---	
1,2-Dichloroethane	0.010	0.050	---	11.3	---	
1,1-Dichloroethylene	0.010	0.031	---	8.5	---	
trans-1,2-dichloroethylene	0.010	0.040	---	10.3	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	0.043	---	14.9	---	
1,3-Dichloropropylene	0.010	0.160	---	16.4	---	
1,1,2,2-Tetrachloroethane	0.010	0.075	---	21.3	---	
1,1,1,2-Tetrachloroethane	0.010	---	---	---	---	
Tetrachloroethylene	0.010	0.075	---	21.3	---	
1,1,1-Trichloroethane	0.010	0.032	---	12.8	---	
1,1,2-Trichloroethane	0.010	0.160	---	16.4	---	
Trichloroethylene	0.010	0.054	---	15.8	---	
Trichlorofluoromethane	0.010	---	---	---	---	
Trichloropropane	0.010	---	---	---	---	
Vinyl chloride	0.010	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35328-13, 35328-11

Field Sample No. 6-OFTC SB-1 SS-5 10' ITC

Date Collected 12-11-85

Date Received 12-13-85

Date Analyzed 12-18-85, 12-31-85

QC Report No. 8020-6

Sample Matrix:

☐ water (µg/L)

☒ Soil

☐ Other

Dilution Factor & conc. 1:100

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	3.910	---	14.5	---	
1,3-Dichlorobenzene	0.005	1.560	---	13.0	---	
1,4-Dichlorobenzene	0.005	1.830	---	12.7	---	
Ethyl benzene	0.005	0.011	---	7.4	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	1.280	---	7.9	---	
				8.2		
				8.3		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35326-17, 35326-7

Field Sample No. 6-OFIC SB-1 SS-2 2.5' TC

Date Collected 12-11-85

Date Received 12-13-85

Date Analyzed 12-18-85, 12-31-86

QC Report No. 8020-6

Sample Matrix:

    / Water (ug/L)

X / Soil

    / Other

Dilution Factor & con, 1:20

\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	ND<0.005	---	---	
Chlorobenzene	0.005	ND<0.005	ND<0.005	---	---	
1,2-Dichlorobenzene	0.005	19.5	ND<0.005	14.3	---	
1,3-Dichlorobenzene	0.005	7.530	ND<0.005	13.0	---	
1,4-Dichlorobenzene	0.005	8.950	ND<0.005	12.8	---	
Ethyl benzene	0.005	0.012	ND<0.005	7.4	---	
Toluene	0.005	0.0077	ND<0.005	4.9	---	
Xylenes (Dimethyl benzene)	0.005	7.660	ND<0.005	7.9	---	
				8.2		
				8.8		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35328-10  
Field Sample No. 6-OFTC SB-1 SS-14 50'ITC  
Date Collected 12-12-85  
Date Received 12-13-85  
Date Analyzed 12-18-85  
QC Report No. 8020-6

Sample Matrix:

☐ Water (ug/L)

☒ Soil

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35328-11

Field Sample No. 6-OFTC SB-1 SS-10 30' ITC

Date Collected 12-11-85

Date Received 12-13-85

Date Analyzed 12-18-85

QC Report No. 8020-6

Sample Matrix:

☐ Water (ug/L)

☒ Soil

☐ Other

Dilution Factor N/A

\*Moisture %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O. Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Dennis R. Kasper

Page 1 of 2

December 17, 1985

56394


35345/rjc

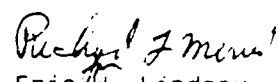
#### REVISED REPORT

Eight (8) soil samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
7-ERA2-SB2-SS5-10'-ITC	12/13/85	1200
7-ERA2-SB2-SS10-30'-ITC	12/13/85	1200
7-ERA2-SB2-SS14-50'-ITC	12/13/85	1200
7-ERA2-SB2-SS15-10'-ITC	12/13/85	1200
7-ERA2-SB3-SS5-10'-ITC	12/14/85	0900
7-ERA2-SB3-SS8-20'-ITC	12/14/85	0900
7-ERA2-SB3-SS10-30'-ITC	12/14/85	0900
7-ERA2-SB3-SS14-50'-ITC	12/14/85	0900

The samples were extracted according to EPA Method 3550 and then analyzed for Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1. The results are listed on the following page.

  
Gary Oishi  
Group Leader

  
Eric W. Lindsay  
Laboratory Manager I

Sample: AF Plant 42 IRP-II ES Job #56394  
Date of Analysis: 1/3/86

<u>Sample</u>	<u>Total Recoverable Petroleum Hydrocarbons (ug/g)</u>
7-ERA2-SB2-SS5-10'-ITC	ND<2
7-ERA2-SB2-SS10-30'-ITC	2
7-ERA2-SB2-SS14-50'-ITC	ND<2
7-ERA2-SB2-SS15-10'-ITC	ND<2
7-ERA2-SB3-SS5-10'-ITC	3
7-ERA2-SB3-SS8-20'-ITC	5300
7-ERA2-SB3-SS10-30'-ITC	3200
7-ERA2-SB3-SS14-50'-ITC	340
*7-ERA2-SB1-SS5-10'-ITC	ND<2
*7-ERA2-SB1-SS5-10'-ITC DUPLICATE	2
*7-ERA2-SB1-SS5-10'-ITC SPIKE	19
*Spike Concentration	17

Percent Recovery: +100%

Relative Percent Difference: N/A

\* - The QC results are from IT Job No. 35328; these samples were analyzed together with the samples in this report and only one set of QC analysis was performed.



**CERTIFICATE OF ANALYSIS**

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

September 29, 1986

Attn: Dennis R. Kasper

Page 1 of 24

December 21, 1985

56394

35357 Jac

REVISED REPORT

Five (5) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
2-PWD2-SB1-SS2-2.5-ITC	12-16-85	0900
2-PWD2-SB1-SS5-10-ITC	12-16-85	0900
2-PWD2-SB1-SS14-50-ITC	12-16-85	0900
2-PWD2-SB1-SS15-10-ITC	12-16-85	0900
2-PWD2-SB1-SS10-30-ITC	12-16-85	0900

The samples were extracted according to CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Milligrams Per Liter (mg/L). We were unable to do spikes on a soluble extract without changing the extraction conditions. The phenols were distilled and determined colorimetrically according to Standard Methods 510C. The results are listed in Table I.

The samples were also extracted according to EPA Method 3550 and then analyzed for total recoverable Oil and Grease by EPA Method 413.2. These results are listed in Table II. The Quality Control Data is listed in Table III.

In addition, the samples were also analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

Also, the samples were analyzed for aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

It is noted that a number of samples covered in this report show substantial concentrations of dichloromethane. At the time these samples were being analyzed, other work being done in the laboratory involved the use of Dichloromethane. We believe the dichloromethane concentrations reported for these samples represent laboratory air contamination and should not be considered as being part of the samples. Laboratory procedures have been changed to minimize dichloromethane contamination in the future.

Table I

	<u>Milligrams/liter</u>				
	<u>2-PWD2-SB1-SS10-30-ITC</u>	<u>2-PWD2-SB1-SS2-2.5-ITC</u>	<u>2-PWD2-SB1-SS5-10-ITC</u>	<u>2-PWD2-SB1-SS14-50-ITC</u>	<u>2-PWD2-SB1-SS15-10-ITC</u>
Arsenic	ND<0.05	ND<0.05	ND<0.05	ND<0.05	ND<0.05
Barium	3.8	3.7	4.5	5.0	4.4
Cadmium	ND<0.03	0.11	ND<0.03	ND<0.03	ND<0.03
Total chromium	ND<0.06	0.7	0.2	0.1	ND<0.07
Lead	6.4	1.9	0.2	ND<0.2	ND<0.2
Mercury	ND<0.001	ND<0.001	0.13	0.001	ND<0.001
Selenium	0.02	0.022	0.02	0.018	0.027
Silver	ND<0.03	ND<0.03	ND<0.03	ND<0.03	ND<0.03
Phenol*	0.33	0.35	0.24	0.21	0.16

Date Analyzed: 12/24/85

\* - Phenol results in ug/g, the samples were analyzed 12/28/85

Table II

	<u>Total Oil and Grease(ug/g)</u>
2-PWD2-SB1-SS2-2.5'-ITC	980
2-PWD2-SB1-SS5-10'-ITC	5
2-PWD2-SB1-SS10-30'-ITC	ND<2
2-PWD2-SB1-SS14-50'-ITC	27
2-PWD2-SB1-SS15-10-ITC	ND<2

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Table III  
Quality Control Data

	Micrograms/gram <u>Total Oil and Grease (ug/g)</u>
2-PWD2-SB1-SS5-10'-ITC	5
2-PWD2-SB1-SS5-10'-ITC Dup	3
Relative Percent Difference: 50	
2-PWD2-SB1-SS5-10'-ITC Spike	30
Spike Amount	29
Percent Recovery: 93%	
Date Analyzed: 01/02/86	

Engineering Science  
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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 2-PWD2-SB1-SS10-30-ITC

Duplicates 35357-056, 35357-057

Spike 35357-057

QC Report No. 8010-11

Date Analyzed 12/31/85

Laboratory Supervisor Approval:

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Dilution Factor N/A

\*Moisture %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		CI	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND	ND	ND	-	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND	ND	ND	-	---	<0.010	---	---	
Bis(2-chloroisopropyl)ether	ND	ND	ND	-	---	<0.010	---	---	
Bromobenzene	ND	ND	ND	-	---	<0.010	---	---	
Bromodichloromethane	ND	ND	ND	-	0.050	<0.010	0.050	100	
Bromoform	ND	ND	ND	-	0.050	<0.010	0.050	100	
Bromomethane	ND	ND	ND	-	---	<0.010	---	---	
Carbon tetrachloride	ND	ND	ND	-	0.050	<0.010	0.049	98	
Chloroacetaldehyde	ND	ND	ND	-	---	<0.010	---	---	
Chloral	ND	ND	ND	-	---	<0.010	---	---	
Chlorobenzene	ND	ND	ND	-	0.050	<0.010	0.045	90	
Chloroethane	ND	ND	ND	-	---	<0.010	---	---	
Chloroform	ND	ND	ND	-	0.050	<0.010	0.050	100	
1-Chlorohexane	ND	ND	ND	-	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND	ND	ND	-	---	<0.010	---	---	
Chloromethane	ND	ND	ND	-	---	<0.010	---	---	
Chloromethyl methyl ether	ND	ND	ND	-	---	<0.010	---	---	
Chlorotoluene	ND	ND	ND	-	---	<0.010	---	---	
Dibromochloromethane	ND	ND	ND	-	0.178	<0.010	0.157	88	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB1-SS10-30-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PP	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.053	106	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.068	136	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.053	106	
Dichloromethane	ND< 0.010	--	--	---	---	<0.010	---	--	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.066	132	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.178	<0.010	0.157	88	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.100	100	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.100	100	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.040	80	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.178	<0.010	0.157	88	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Lab Sample No. 35357-052Client Field Sample No. 2-PWD2-SB1-SS2-2.5-ITCProject AF Plant 42 IRP IIDate Collected 12/16/85Client No. Date Received 12/17/85Laboratory Supervisor Approval: Date Analyzed 12/30/85QC Report No. 8010-11

Sample Matrix:

☐ / Water (ug/L)  Dilution Factor N/A☒ / Soil (ug/g)  \*Moisture  %☐ / Other Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

2-PWD2-SB1-SS2-2.5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.060	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35357-053  
 Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB1-SS5-10-ITC  
 Project AF Plant 42 IRP II Date Collected 12/16/85  
 Client No. \_\_\_\_\_ Date Received 12/17/85  
 Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/30/85  
 QC Report No. 8010-11  
 Sample Matrix: \_\_\_\_\_  
☐ / Water (ug/L) Dilution Factor N/A  
☒ / Soil (ug/g) \*Moisture \_\_\_\_\_ %  
☐ / Other \_\_\_\_\_  
 Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB1-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.092	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35357-054  
 Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB1-SS14-50-ITC  
 Project AF Plant 42 IRP II Date Collected 12/16/85  
 Client No. \_\_\_\_\_ Date Received 12/17/85  
 Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/30/85  
 QC Report No. 8010-11  
 Sample Matrix:  
☒ Water (ug/L) Dilution Factor N/A  
☒ Soil (ug/g) \*Moisture \_\_\_\_\_ %  
☐ Other \_\_\_\_\_  
 Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	---
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	---
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	---
Bromobenzene	0.010	ND<0.010	---	---	---	---
Bromodichloromethane	0.010	ND<0.010	---	---	---	---
Bromoform	0.010	ND<0.010	---	---	---	---
Bromomethane	0.010	ND<0.010	---	---	---	---
Carbon tetrachloride	0.010	ND<0.010	---	---	---	---
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	---
Chloral	0.010	ND<0.010	---	---	---	---
Chlorobenzene	0.010	ND<0.010	---	---	---	---
Chloroethane	0.010	ND<0.010	---	---	---	---
Chloroform	0.010	ND<0.010	---	---	---	---
1-Chlorohexane	0.010	ND<0.010	---	---	---	---
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	---
Chloromethane	0.010	ND<0.010	---	---	---	---
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	---
Chlorotoluene	0.010	ND<0.010	---	---	---	---
Dibromochloromethane	0.010	ND<0.010	---	---	---	---

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

2-PWD2-SB1-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.117	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
Page 12

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35357-055  
Client AF Plant 42 IRP II Field Sample No. 2-PWD2-SB1-SS15-10-ITC  
Project AF Plant 42 IRP II Date Collected 12/16/85  
Client No.                      Date Received 12/17/85  
Laboratory Supervisor Approval:                      Date Analyzed 12/30/85  
QC Report No. 8010-11

Sample Matrix:

☐ Water (ug/L)

Dilution Factor N/A

☒ Soil (ug/g)

\*Moisture                      %

☐ Other                     

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
halogenated Volatile Organics  
Sw Method 8010

2-PWD2-SB1-GS15-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.080	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35357-056  
 Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB1-SS10-30-ITC  
 Project AF Plant 42 IRP II Date Collected 12/16/85  
 Client No. \_\_\_\_\_ Date Received 12/17/85  
 Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/30/85  
 \_\_\_\_\_ QC Report No. 8010-11  
 Sample Matrix: \_\_\_\_\_  
   ☐ / Water (ug/L) \_\_\_\_\_ Dilution Factor N/A  
   ☒ / Soil (ug/g) \_\_\_\_\_ \*Moisture \_\_\_\_\_ %  
   ☐ / Other \_\_\_\_\_  
 Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB1-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.275	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35357-057 DGP  
Field Sample No 2-PWD2-SB1-SS10-30-ITC  
Date Collected 12/16/85  
Date Received 12/17/85  
Date Analyzed 12/31/85  
QC Report No. 8010-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB1-SS10-30-ITC Dup.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.102	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

ES Job No. 56394  
Client   
Project AF Plant 42 IRP II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 35357-058 SPIKE  
Field Sample No. 2-PWD2-SB1-SS10-30-ITC  
Date Collected 12/16/85  
Date Received 12/17/85  
Date Analyzed 12/31/85  
QC Report No. 8010-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	---	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	---	---	---	---	
Bis(2-chloroisopropyl) ether	0.010	---	---	---	---	
Bromobenzene	0.010	---	---	---	---	
Bromodichloromethane	0.010	0.050	---	13.7	---	
Bromoform	0.010	0.050	---	19.1	---	
Bromomethane	0.010	---	---	---	---	
Carbon tetrachloride	0.010	0.049	---	13.1	---	
Chloroacetaldehyde	0.010	---	---	---	---	
Chloral	0.010	---	---	---	---	
Chlorobenzene	0.010	0.045	---	23.9	---	
Chloroethane	0.010	---	---	---	---	
Chloroform	0.010	0.050	---	10.8	---	
1-Chlorohexane	0.010	---	---	---	---	
2-Chloroethyl vinyl ether	0.010	---	---	---	---	
Chloromethane	0.010	---	---	---	---	
Chloromethyl methyl ether	0.010	---	---	---	---	
Chlorotoluene	0.010	---	---	---	---	
Dibromochloromethane	0.010	0.157	---	16.4	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB1-SS10-30-ITC SP-103

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	---	---	---	---	
Dichlorodifluoromethane	0.010	---	---	---	---	
1,1-Dichloroethane	0.010	0.053	---	9.7	---	
1,2-Dichloroethane	0.010	0.052	---	11.6	---	
1,1-Dichloroethylene	0.010	0.068	---	8.6	---	
trans-1,2-dichloroethylene	0.010	0.053	---	10.3	---	
Dichloromethane	0.010	---	---	---	---	
1,2-Dichloropropane	0.010	0.066	---	15.0	---	
1,3-Dichloropropylene	0.010	0.157	---	16.4	---	
1,1,2,2-Tetrachloroethane	0.010	0.100	---	21.1	---	
1,1,1,2-Tetrachloroethane	0.010	---	---	---	---	
Tetrachloroethylene	0.010	0.100	---	21.1	---	
1,1,1-Trichloroethane	0.010	0.040	---	12.8	---	
1,1,2-Trichloroethane	0.010	0.157	---	16.4	---	
Trichloroethylene	0.010	0.048	---	15.8	---	
Trichlorofluoromethane	0.010	---	---	---	---	
Trichloropropane	0.010	---	---	---	---	
Vinyl chloride	0.010	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. \$35357-14,35357-9,35357-12  
Field Sample No. 2-PWD2-SB1-SS2-2.5-ITC  
Date Collected 12/16/85  
Date Received 12/18/85  
Date Analyzed 12/30/85, 1/2/86  
QC Report No. 8020-11

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor c conc, 1:10, 1:100  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.5	ND<0.5	---	---	---	
1,3-Dichlorobenzene	0.5	4.8	---	13.0	---	
1,4-Dichlorobenzene	0.5	ND<0.5	---	---	---	
Ethyl benzene	0.5	0.14	---	7.3	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.05	2.0	---	7.9	---	
				8.2		
				8.8		

S - Lab sample numbers represent the different dilutions used in the analysis of this sample.

c - Several dilution factors were used a) to determine the detection limit or b) due to matrix effects.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

AD-A190 943

## INSTALLATION RESTORATION PROGRAM PHASE 2

CONFIRMATION/QUANTIFICATION STAG (U)

ENGINEERING-SCIENCE INC PASADENA CALIF

**28 FEB 87**

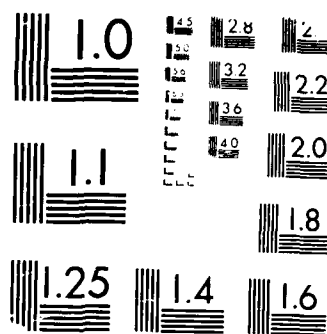
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F33615-84-D-4403

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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS 1963-A



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35357-13

Field Sample No. 2-PWD2-SB1-SS5-10-ITC

Date Collected 12/16/85

Date Received 12/18/85

Date Analyzed 12/30/86

QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35357-15  
Field Sample No. 2-PWD2-SB1-SS10-30-ITC  
Date Collected 12/16/85  
Date Received 12/18/85  
Date Analyzed 12/31/86  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35357-15  
Field Sample No. 2-PWD2-SB1-SS14-50-ITC  
Date Collected 12/16/85  
Date Received 12/18/85  
Date Analyzed 12/30/86  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	0.009	---	14.5		
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	0.009	---	12.7		
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35357-14  
Field Sample No. 2-PWD2-SB1-SS15-10-ITC  
Date Collected 12/16/85  
Date Received 12/18/85  
Date Analyzed 12/31/86  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

17625 Farringham Way • Livermore, California 94551 • 415-921-4631 • 415-923-9200



## CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O. Box 538  
Arcadia, CA 91006

Date October 8, 1986

Attn: Dennis R. Kasper

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December 19, 1985

56435

35374/rjc

### REVISED REPORT

Eight (8) soil samples.

<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
2-PWD2-SB2-SS2-2.5-ITC	12-16-85	1500
2-PWD2-SB2-SS5-10-ITC	12-16-85	1500
2-PWD2-SB2-SS10-30-ITC	12-17-85	0900
2-PWD2-SB2-SS14-50-ITC	12-17-85	0900
2-PWD2-SB3-SS2-2.5-ITC	12-17-85	1200
2-PWD2-SB3-SS5-10-ITC	12-17-85	1200
2-PWD2-SB3-SS10-30-ITC	12-17-85	1200
2-PWD2-SB3-SS14-50-ITC	12-18-85	0900

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Milligrams Per Liter (mg/g). We were unable to do spikes on a soluble extract without changing the extraction conditions. The phenols were distilled and determined colorimetrically according to standard method #510C. The results are listed in Table I.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

Also, the samples were extracted according to EPA Method 3550 and then analyzed for Total recoverable Oil and Grease by EPA Method 413.2. The results are listed in Table II, and the Quality Control Data is listed in Table II.

It is noted that a number of samples covered in this report show substantial concentrations of dichloromethane. At the time these samples were being analyzed, other work being done in the laboratory involved the use of Dichloromethane. We believe the dichloromethane concentrations reported for these samples represent laboratory air contamination and should not be considered as being part of the samples. Laboratory procedures have been changed to minimize dichloromethane contamination in the future.

Table I

Date Analyzed: 12/24/85

	Milligrams/liter			
	2-PWD2- SB2-SS5-10'	2-PWD2- SB2-SS14 50'	2-PWD2- SB2-SS2-2.5	2-PWD- SB3-S22-2.5'
Arsenic	0.054	ND<0.05	ND<0.05	ND<0.05
Barium	4.2	4.9	2.1	3.9
Cadmium	ND<0.03	ND<0.03	0.07	0.06
Chromium	ND<0.06	0.07	0.52	0.16
Lead	0.2	ND<0.2	0.4	ND<0.2
Mercury	0.008	0.006	0.011	0.005
Selenium	ND<0.005	ND<0.005	ND<0.005	ND<0.005
Silver	ND<0.03	ND<0.03	ND<0.03	ND<0.03
Phenol	ND<0.04	ND<0.04	0.88	0.76

	Milligrams/liter			
	2-PWD2- SB3-SS14-50'	2-PWD2- SB2-SS10-30'	2-PWD2- SB3-SS10-30'	2-PWD2- SB3 SS5-10'
Arsenic	ND<0.05	ND<0.05	ND<0.05	0.085
Barium	3.3	4.8	1.7	4.4
Cadmium	ND<0.03	ND<0.03	ND<0.03	0.05
Chromium	ND<0.06	ND<0.06	ND<0.06	0.17
Lead	ND<0.2	ND<0.2	ND<0.2	0.2
Mercury	0.005	0.025	0.006	0.005
Selenium	ND<0.005	ND<0.005	ND<0.005	ND<0.005
Silver	ND<0.03	ND<0.03	ND<0.03	ND<0.03
Phenol	ND<0.04	ND<0.04	ND<0.04	0.16

\* Phenol results are reported in ug/g; phenols analyzed on 12/21/85.

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

Table II

Sample: AF Plant 42 IRP-II ES Job #56394  
Date of Analysis: 01/16/86

Total Oil and Grease (ug/g)

2-PWD2-SB2-SS2-2.5'-ITC	35
2-PWD2-SB2-SS5-10'-ITC	ND<2
2-PWD2-SB2-SS10-30'-ITC	ND<2
2-PWD2-SB2-SS14-50'-ITC	10
2-PWD2-SB3-SS2-2.5'-ITC	ND<2
2-PWD2-SB3-SS5-10'-ITC	ND<2
2-PWD2-SB3-SS10-30'-ITC	ND<2
2-PWD2-SB3-SS14-50'-ITC	ND<2

Table III

Quality Control Data

Total Oil and Grease (ug/g)

2-PWD2-SB3-SS10-30'-ITC	ND<2
2-PWD2-SB3-SS10-30'-ITC Dup.	ND<2

Relative Percent Difference: N/A

2-PWD2-SB3-SS10-30'-ITC Spike	6000
Spike Amount	6000

Pecent Recovery: 100%

Date Analyzed: 01/06/86

N/A - Not applicable.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 2-PWD2-SB3-SS10-30-ITC

Duplicates 35374-4, 35374-5

Spike 35374-6

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8010-12

Date Analyzed 1-2-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PP	
Benzyl chloride	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Bis(2-chloroisopropyl)ether	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Bromobenzene	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Bromodichloromethane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	0.050	<0.010	0.052	104	
Bromoform	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	0.050	<0.010	0.048	96	
Bromomethane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Carbon tetrachloride	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	0.050	<0.010	0.045	90	
Chloroacetaldehyde	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Chloral	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Chlorobenzene	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	0.050	<0.010	0.053	106	
Chloroethane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Chloroform	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	0.050	<0.010	0.052	104	
1-Chlorohexane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Chloromethane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Chlorotoluene	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	---	<0.010	---	---	
Dibromochloromethane	ND <sub>10</sub>	ND <sub>10</sub>	ND <sub>10</sub>	---	0.178	<0.010	0.192	108	

continued on next page



QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB3-SS10-30'-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	0	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	0	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.053	106	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.056	112	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.047	94	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.046	92	
Dichloromethane	ND< 0.010	0.042	0.084	0.67	0.050	0.063	0.129	132	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.063	126	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	0	0.178	<0.010	0.192	108	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	0	0.100	<0.010	0.106	106	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	0	--	<0.010	---	---	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	0	0.100	<0.010	0.106	106	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.054	108	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	0	0.178	<0.010	0.192	108	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	0	0.050	<0.010	0.070	140	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	0	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	0	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	0	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-73  
Field Sample No. 2-PWD2-SB2-SS2-2.5-ITC  
Date Collected 12/16/85  
Date Received 12/19/85  
Date Analyzed 12/31/85  
QC Report No. 8010-12

**Sample Matrix:**

Water (ug/L)

Dilution Factor N/A

/X/ Soil (ūg/g)

\*Moisture

/ / Other

### Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB2 SS2 2.5' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35374-72  
Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB2-SS5-10-ITC  
Project AF Plant 42 Date Collected 12/16/85  
Client No. \_\_\_\_\_ Date Received 12/19/85  
Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/31/85  
QC Report No. 8010-12

Sample Matrix:

☐ / Water (ug/L)

Dilution Factor N/A

☒ / Soil (ug/g)

\*Moisture \_\_\_\_\_ %

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB2 SS5 10' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35374-71  
Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB2-SS10-30-ITC  
Project AF Plant 42 Date Collected 12/17/85  
Client No. \_\_\_\_\_ Date Received 12/19/85  
Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/31/85  
QC Report No. 8010-12

## Sample Matrix:

☐ Water (ug/L)Dilution Factor N/A☒ Soil (ug/g)

\*Moisture \_\_\_\_\_ %

☐ Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB2 SS10 30' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35374-79  
Client AF Plant 42 Field Sample No. 2-PWD2-SB2-SS14-50-ITC  
Project AF Plant 42 Date Collected 12/17/85  
Client No.                      Date Received 12/19/85  
Laboratory Supervisor Approval:                      Date Analyzed 12/31/85  
QC Report No. 8010-12

Sample Matrix:

☐ / Water (ug/L)

Dilution Factor N/A

☒ / Soil (ug/g)

\*Moisture                      %

☐ / Other                     

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB2 SS14 50' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35374-70  
Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB3-SS2-2.5-ITC  
Project AF Plant 42 Date Collected 12/17/85  
Client No. \_\_\_\_\_ Date Received 12/19/85  
Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/31/85  
QC Report No. 8010-12

## Sample Matrix:

☐ / Water (ug/L)Dilution Factor N/A☒ / Soil (ug/g)

\*Moisture \_\_\_\_\_ %

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB3 SS2 2.5' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35374-76  
Client \_\_\_\_\_ Field Sample No. 2-PWD2-SB3-SS5-10-ITC  
Project AF Plant 42 Date Collected 12/17/85  
Client No. \_\_\_\_\_ Date Received 12/19/85  
Laboratory Supervisor Approval: \_\_\_\_\_ Date Analyzed 12/31/85  
QC Report No. 8010-12

Sample Matrix: \_\_\_\_\_

☐ / Water (ug/L)

Dilution Factor N/A

☒ / Soil (ug/g)

\*Moisture \_\_\_\_\_ %

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB3 SS5 10' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394 Lab Sample No. 35374-74  
Client AF Plant 42 Field Sample No. 2-PWD2-SB3-SS14-50-ITC  
Project AF Plant 42 Date Collected 12/18/85  
Client No.                      Date Received 12/19/85  
Laboratory Supervisor Approval:                      Date Analyzed 12/31/85  
QC Report No. 8010-12

Sample Matrix:

☐ / Water (ug/L) Dilution Factor N/A  
☒ / Soil (ug/g) \*Moisture                      %  
☐ / Other                     

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB3 SS14 50' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.300	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-4  
Field Sample No. 2-PWD2-SB3-SS10-30-ITC  
Date Collected 12/17/85  
Date Received 12/19/85  
Date Analyzed 1/2/86  
QC Report No. 8010-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	----	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	----	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	----	---	
Bromobenzene	0.010	ND<0.010	---	----	---	
Bromodichloromethane	0.010	ND<0.010	---	----	---	
Bromoform	0.010	ND<0.010	---	----	---	
Bromomethane	0.010	ND<0.010	---	----	---	
Carbon tetrachloride	0.010	ND<0.010	---	----	---	
Chloroacetaldehyde	0.010	ND<0.010	---	----	---	
Chloral	0.010	ND<0.010	---	----	---	
Chlorobenzene	0.010	ND<0.010	---	----	---	
Chloroethane	0.010	ND<0.010	---	----	---	
Chloroform	0.010	ND<0.010	---	----	---	
1-Chlorohexane	0.010	ND<0.010	---	----	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	----	---	
Chloromethane	0.010	ND<0.010	---	----	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	----	---	
Chlorotoluene	0.010	ND<0.010	---	----	---	
Dibromochloromethane	0.010	ND<0.010	---	----	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB3 SS10 30' ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.042	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB3 SS10 30' ITC DUP.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.084	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No.	<u>56394</u>	Lab Sample No.	<u>35374-6</u>	<u>SPIKE</u>
Client	<u></u>	Field Sample No.	<u>2-PWD2-SB3-SS10-30-ITC</u>	
Project	<u>AF Plant 42</u>	Date Collected	<u>12/17/85</u>	
Client No.	<u></u>	Date Received	<u>12/19/85</u>	
Laboratory Supervisor Approval:	<u></u>	Date Analyzed	<u>1/2/86</u>	
		QC Report No.	<u>8010-12</u>	

Sample Matrix:

/ / Water (ug/L)

Dilution Factor	N/A
-----------------	-----

  X   / Soil (ug/g)

*Moisture	%
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
0	0

- / - - / - Other

## Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.052	---	13.7	---	
Bromoform	0.010	0.048	---	8.9	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.045	---	13.1	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.053	---	23.7	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.052	---	10.8	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.192	---	16.4	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2 PWD2 SB3 SS10 30' ITC SPIKE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.053	---	9.6	---	
1,2-Dichloroethane	0.010	0.056	---	11.6	---	
1,1-Dichloroethylene	0.010	0.047	---	8.4	---	
trans-1,2-dichloroethylene	0.010	0.046	---	10.8	---	
Dichloromethane	0.010	0.129	---	5.8	---	
1,2-Dichloropropane	0.010	0.063	---	15.0	---	
1,3-Dichloropropylene	0.010	0.192	---	16.4	---	
1,1,2,2-Tetrachloroethane	0.010	0.106	---	21.4	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.106	---	21.4	---	
1,1,1-Trichloroethane	0.010	0.054	---	12.8	---	
1,1,2-Trichloroethane	0.010	0.192	---	16.4	---	
Trichloroethylene	0.010	0.070	---	15.8	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 2 PWD2 SB-3 SS2 2.5' ITC

Duplicates 38374-34, 35374-42

Spike 35374-43

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/Kg)

☐ / Other

Spike Source

QC Report No. 8020-11

Date Analyzed 1/3/86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	<0.005	0.067	105	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.041	73	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.103	<0.005	0.077	75	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.102	<0.005	0.076	75	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.088	<0.005	0.062	70	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.038	70	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.045	80	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	<0.005	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35374-30

Field Sample No. 2 PWD2 SB2 SS2 2.5' ITC

Date Collected

Date Received 12/19/85

Date Analyzed 1/2/85

QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/Kg)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the level of detection for this analysis is less than the amount stated in the table.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-28  
Field Sample No. 2 PWD2 SB2 SS5 10' ITC  
Date Collected \_\_\_\_\_  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ / water (ug/L)  
☒ / Soil (ug/Kg)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-29  
Field Sample No. 2 PWD2 SB2 SS10 30' ITC  
Date Collected \_\_\_\_\_  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-31  
Field Sample No. 2 PWD2 SB2 SS14 50' ITC  
Date Collected 12/17/85  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-34  
Field Sample No. 2 PWD2 SB3 SS2 2.5' ITC  
Date Collected 12/17/85  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-42 DUP.  
Field Sample No. 2 PWD2 SB3 SS2 2.5' ITC  
Date Collected 12/16/85  
Date Received 12/19/85  
Date Analyzed 1/3/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug Kg)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-43 SPIKE  
Field Sample No. 2 PWD2 SB3 SS2 2.5' ITC  
Date Collected 12/16/85  
Date Received 12/19/85  
Date Analyzed 1/3/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.067	---	2.6	---	
Chlorobenzene	0.005	0.041	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.077	---	14.5	---	
1,3-Dichlorobenzene	0.005	0.076	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.062	---	12.7	---	
Ethyl benzene	0.005	0.038	---	7.4	---	
Toluene	0.005	0.045	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-27  
Field Sample No. 2 PWD2 SB3 SS5 10' ITC  
Date Collected 12/17/85  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/Kg)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-32  
Field Sample No. 2 PW'2 SB3 SS10 30' ITC  
Date Collected 12/17/85  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35374-33  
Field Sample No. 2 PWD2 SB3 SS14 50' ITC  
Date Collected 12/18/85  
Date Received 12/19/85  
Date Analyzed 1/2/85  
QC Report No. 8020-11

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/Kg)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Dennis R. Kasper

Page 1 of 18

December 20, 1985

56394

35393/iac

### REVISED REPORT

Four (4) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
2-PWD2-SB4-SS2-2.5-ITC	12-18-85	1200
2-PWD2-SB4-SS5-10-ITC	12-18-85	1200
2-PWD2-SB4-SS10-30-ITC	12-18-85	1400
2-PWD2-SB4-SS14-50-ITC	12-19-85	0900

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Milligrams Per Liter(mg/L). Unable to do spikes on a soluble extract without changing the extraction conditions. The phenols were distilled and determined colorimetrically according to Standard Methods 510C. The results are listed in Table I.

Also, the samples were extracted according to EPA Method 3550 and then analyzed for total recoverable oil and grease by EPA Method 413.2. The results are listed in Table II, and the Quality Control Data is listed in Table III.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director

Table I

	<u>Milligrams/liter</u>			
	<u>2-PWD2-SB4- SS2-2.5'-ITC</u>	<u>2-PWD2-SB4- SS5-10'-ITC</u>	<u>2-PWD2-SB4- SS10-30'-ITC</u>	<u>2-PWD2-SB4- SS14-50'-ITC</u>
Arsenic	ND<0.05	0.06	ND<0.06	ND<0.06
Barium	6.4	1.5	2.3	2.4
Cadmium	ND<0.03	0.04	ND<0.03	0.07
Total chromium	ND<0.06	0.06	0.06	0.28
Lead	ND<0.2	ND<0.2	ND<0.2	0.2
Mercury	0.003	0.005	0.003	0.005
Selenium	ND<0.005	ND<0.005	ND<0.005	ND<0.005
Silver	ND<0.07	ND<0.07	ND<0.07	ND<0.07
Phenol*	0.92	0.08	0.16	0.08

Date Analyzed: 12/24/85

\* - Phenol results in micrograms per grams(ug/g); phenols analyzed 12/21/85.

Date Analyzed: 12/24/85

Table II

Sample: AF Plant 42-IRP II ES Job #56394  
Date of Analysis: 1/2/86

	<u>Total Oil and Grease(ug/g)</u>
2-PWD2-SB4-SS2-2.5'-ITC	3
2-PWD2-SB4-SS5-10'-ITC	ND<2
2-PWD2-SB4-SS10-30'-ITC	ND<2
2-PWD2-SB4-SS14-50'-ITC	ND<2

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Table III  
Quality Control Data

	<u>Total Oil and Grease (ug/g)</u>
2-PWD2-SB4-SS2-2.5'-ITC	3
2-PWD2-SB4-SS2-2.5'-ITC Dup	3
Relative Percent Difference:	0
2-PWD2-SB4-SS2-2.5'-ITC Spike	36
Spike Amount	30
Percent Recovery:	110
Date Analyzed:	01/02/86

Engineering Science  
Page 4

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35393-87  
Field Sample No. 2-PWD2-SB4-SS2-2.5'-ITC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/2/86  
QC Report No. 8010-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

2-PWD2-SB4-SS2-2.5'-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.032	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35393-88  
Field Sample No. 2-PWD2-SB4-SS5-10'-ITC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/2/86  
QC Report No. 8010-12

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

2-PWD2-SB4-SS5-10'-1TC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-Dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.041	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected, the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35393-89  
Field Sample No. 2-PWD2-SB4-SS14-50'-ITC  
Date Collected 12/19/85  
Date Received 12/20/85  
Date Analyzed 1/2/86  
QC Report No. 8010-12

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB4-SS14-50'-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.010	---	9.6	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.171	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                       
Project AF Plant 42  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 35393-90  
Field Sample No. 2-PWD2-SB4-SS10-30'-ITC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/2/86  
QC Report No. 8010-12

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB4-SS10-301-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.017	---	5.6	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lap Sample Nos. 2-PWD2-SB4-SS14-50'-ITC  
Duplicates 35393-49, 35393-50  
Spike 35393-51

QC Report No. 8020-12  
Date Analyzed 1/3/86  
Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other

Dilution Factor N/A  
\*Moisture %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	<0.005	0.052	81	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.049	88	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.103	<0.005	0.094	91	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.102	<0.005	0.091	89	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.088	<0.005	0.080	91	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.038	70	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.054	96	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	<0.005	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35393-48

Field Sample No. 2-PWD2-SB4-SS2-2.5'-ITC

Date Collected 12/18/85

Date Received 12/20/85

Date Analyzed 1/3/86

QC Report No. 8020-12

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Dilution Factor N/A

\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lap Sample No. 35393-47

Field Sample No. 2-PWD2-SB4-SS5-10'-ITC

Date Collected 12/18/85

Date Received 12/20/85

Date Analyzed 1/3/86

QC Report No. 8020-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35393-46  
Field Sample No. 2-PWD2-SB4-SS10-30'-ITC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/3/86  
QC Report No. 8020-12

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35393-49  
Field Sample No. 2-PWD2-SB4-SS14-50'-ETC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/3/86  
QC Report No. 8020-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35393-50 DUP  
Field Sample No. 2-PWD2-SB4-SS14-50'-ITC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/3/86  
QC Report No. 8020-12

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                       
Project AF Plant 42  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 35393-51 SPIKE  
Field Sample No. 2-PWD2-SB4-SS14-50'-ITC  
Date Collected 12/18/85  
Date Received 12/20/85  
Date Analyzed 1/3/86  
QC Report No. 8020-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.052	---	2.6	---	
Chlorobenzene	0.005	0.049	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.094	---	14.5	---	
1,3-Dichlorobenzene	0.005	0.091	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.080	---	12.7	---	
Ethyl benzene	0.005	0.038	---	7.4	---	
Toluene	0.005	0.054	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Dennis R. Kasper

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December 21, 1985

56394

35401/lac

#### REVISED REPORT

Five (5) soil samples.

<u>Sample</u>	<u>Date</u>	<u>Time</u>
18-ADA2-SB1-SS5-10-ITC	12-19-85	1100
18-ADA2-SB1-SS8-20-ITC	12-19-85	1100
2-PWD2-SB5-SS5-10-ITC	12-19-85	1600
2-PWD2-SB5-SS10-30-ITC	12-20-85	0900
2-PWD2-SB5-SS14-50-ITC	12-20-85	0900

Three samples were extracted according to CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Milligrams Per Liter (mg/L). We were unable to do spikes on a soluble extract without changing the extraction conditions. The phenols were distilled and determined colorimetrically according to Standard Methods 510C. The results are listed in Table I.

The five samples were extracted according to EPA Method 3550 and then analyzed for total recoverable Oil and Grease by EPA Method 413.2. These results are listed in Table II, and the Quality Control Data is listed in Table III.

The five samples were also analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

Also, the samples were analyzed for aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director

Table I

Date Analyzed: 12/26/85

	<u>Milligrams/liter</u>		
	<u>2-PWD2-SB5- SS14-50'-ITC</u>	<u>2-PWD2-SB5- SS5-10'-ITC</u>	<u>2-PWD2-SB5- SS10-30'-ITC</u>
Arsenic	ND<0.05	ND<0.05	ND<0.05
Barium	5.8	3.3	3.0
Cadmium	ND<0.03	0.04	ND<0.03
Total chromium	0.18	0.07	ND<0.07
Lead	ND<0.2	ND<0.2	ND<0.2
Mercury	0.004	0.004	0.004
Selenium	0.022	0.012	0.019
Silver	ND<0.03	ND<0.03	ND<0.03
Phenol*	ND<0.1	ND<0.1	0.1 (mg/Kg)

\*Phenols are reported in Micrograms/grams (ug/g); Phenols analyzed on 1/3/86.

Table II

Sample: AF Plant 42 IRP II ES Job #56394

Date Analyzed: 1/2/86

	<u>Total Oil and Grease(ug/g)</u>
18-ADA2-SB1-SS5-10'-ITC	ND<2
18-ADA2-SB1-SS8-20'-ITC	ND<2
2-PWD2-SB5-SS5-10'-ITC	ND<2
2-PWD2-SB5-SS10-30'-ITC	ND<2
2-PWD2-SB5-SS14-50'-ITC	ND<2

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Table III

Quality Control Data  
Date Analyzed: 01/02/86

<u>Total Oil and Grease (ug/g)</u>	
2-PWD2-SB5-SS5-10'-ITC	ND<2
2-PWD2-SB5-SS5-10'-ITC Dup	ND<2
Relative Percent Difference: N/A	
2-PWD2-SB5-SS5-10'-ITC Spike	28
Spike Amount	30
Percent Recovery: 93%	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35401-048  
Field Sample No. 2-PWD2-SB5-SS10-30-ITC  
Date Collected 12/20/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8010-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB5-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.172	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35401-049  
Field Sample No. 2-PWD2-SB5-SS14-50-ITC  
Date Collected 12/20/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8010-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB5-SS14-50-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.307	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

Lab Sample No. 35401-050  
Field Sample No. 18-ADA2-SB1-SS5-10-1TC  
Date Collected 12/19/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8010-12

Sample Matrix:

Water (ug/L)

Dilution Factor N/A

X /  $\text{SO}_4^{2-}$  (ug/g)

\*Moisture

Other

### Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

18-ADA2-SB1-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.267	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                       
Project AF Plant 42 IRP II  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 35401-050R  
Field Sample No. 2-PWD2-SB5-SS5-10-ITC  
Date Collected 12/19/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8010-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

2-PWD2-SB5-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.021	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No.	<u>56394</u>	Lab Sample No.	<u>35401-051R</u>
Client	<u></u>	Field Sample No.	<u>18-ADA2-SB1-SS8-20-ITC</u>
Project	<u>AF Plant 42 IRP II</u>	Date Collected	<u>12/19/85</u>
Client No.	<u></u>	Date Received	<u>12/21/85</u>
Laboratory Supervisor Approval:	<u></u>	Date Analyzed	<u>12/30/85</u>
		QC Report No.	<u>8010-12</u>

Sample Matrix:

   / Water (ug/L) \_\_\_\_\_ Dilution Factor   N/A    
X / Soil (ug/g) \_\_\_\_\_ \*Moisture                      %  
   / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

18-ADA2-SB1-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.064	---	5.8	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35401-12

Field Sample No. 18-ADA2-SB1-SS5-10-ITC

Date Collected 12/19/85

Date Received 12/21/85

Date Analyzed 12/30/85

QC Report No. 8020-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35401-9  
Field Sample No. 18-ADA2-SB1-SS8-20-ITC  
Date Collected 12/19/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8020-12

Sample Matrix:

☐ / water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35401-11

Field Sample No. 2-PWD2-SB5-SS5-10-ITC

Date Collected 12/19/85

Date Received 12/21/85

Date Analyzed 12/30/85

QC Report No. 8020-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35401-10  
Field Sample No. 2-PWD2-SB5-SS10-30-ITC  
Date Collected 12/20/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8020-12

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35401-8  
Field Sample No. 2-PWD2-SB5-SS14-50-ITC  
Date Collected 12/20/85  
Date Received 12/21/85  
Date Analyzed 12/30/85  
QC Report No. 8020-12

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: M.A. Guthrie

Page 1 of 23

January 31, 1986

56394

35730/lac

#### REVISED REPORT

Three (3) water samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
DW3-1-ITC	1-30-86	0900
DW1-1-ITC	1-30-86	1030
DW8-1-ITC	1-30-86	1200

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 601.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 602. The results are listed on the following summary sheets.

One sample was also extracted according to soluble CAM Title 22 and analyzed by AAS. The cyanide was distilled and determined by Standard Methods 412B and 412E. The results are listed in the following metals and Environmental Quality Parameters summary sheets.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director





ANALYTICAL RESULTS SUMMARY  
Environmental Quality Parameters

Page: 4  
Job #35730

QC Report No. 66700-6  
Laboratory Supervisor Approval:

Laboratory Supervisor Approval:

100

Dilution factor

★ Moisture

100

Dilution factor

★ Moisture

[illegible]

\* - If % moisture is reported, results \*x are presented on a dry-weight basis.



QC Report No. 412E  
Laboratory Supervisor Approval:

Dilution Factor

## ★Moisture

Spike Source(s)

\* - If % moisture is reported, results are presented on a dry-weight basis.

Engineering Science  
Page 6

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics

~~SW Method 8010~~

EPA Method 601

Lab Sample Nos. DW3-1-ITC  
Duplicates 35730-3, 35730-6  
Spike 35730-4

QC Report No. 8010-13

Date Analyzed 2-6-86

Laboratory Supervisor Approval:

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other

Dilution Factor N/A

\*Moisture %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND<2	ND<2	ND<2	---	---	<2	---	---	
Bis(2-Chloroethoxy)methane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Bis(2-chloroisopropyl)ether	ND<2	ND<2	ND<2	---	---	<2	---	---	
Bromobenzene	ND<2	ND<2	ND<2	---	---	<2	---	---	
Bromodichloromethane	ND<2	ND<2	ND<2	---	10	<2	12	120	
Bromoform	ND<2	ND<2	ND<2	---	10	<2	9.5	95	
Bromomethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Carbon tetrachloride	ND<2	ND<2	ND<2	---	10	<2	11	110	
Chloroacetaldehyde	ND<2	ND<2	ND<2	---	---	<2	---	---	
Chloral	ND<2	ND<2	ND<2	---	---	<2	---	---	
Chlorobenzene	ND<2	ND<2	ND<2	---	10	<2	11	110	
Chloroethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Chloroform	ND<2	ND<2	ND<2	---	10	<2	11	110	
1-Chlorohexane	ND<2	ND<2	ND<2	---	---	<2	---	---	
2-Chloroethyl vinyl ether	ND<2	ND<2	ND<2	---	---	<2	---	---	
Chloromethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Chloromethyl methyl ether	ND<2	ND<2	ND<2	---	---	<2	---	---	
Chlorotoluene	ND<2	ND<2	ND<2	---	---	<2	---	---	
Dibromochloromethane	ND<2	ND<2	ND<2	---	35	<2	34	97	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW3-1-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Dichlorodifluoromethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
1,1-Dichloroethane	ND<2	ND<2	ND<2	---	10	<2	11	110	
1,2-Dichloroethane	ND<2	ND<2	ND<2	---	10	<2	11	110	
1,1-Dichloroethylene	ND<2	ND<2	ND<2	---	10	<2	12	120	
trans-1,2-dichloroethylene	ND<2	ND<2	ND<2	---	10	<2	11	110	
Dichloromethane	ND<2	ND<2	ND<2	---	10	<2	6.5	65	
1,2-Dichloropropane	ND<2	ND<2	ND<2	---	14	<2	15	107	
1,3-Dichloropropylene	ND<2	ND<2	ND<2	---	35	<2	34	97	
1,1,2,2-Tetrachloroethane	ND<2	ND<2	ND<2	---	20	<2	21	105	
1,1,1,2-Tetrachloroethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Tetrachloroethylene	ND<2	ND<2	ND<2	---	20	<2	21	105	
1,1,1-Trichloroethane	ND<2	ND<2	ND<2	---	10	<2	9.3	93	
1,1,2-Trichloroethane	ND<2	ND<2	ND<2	---	35	<2	34	97	
Trichloroethylene	ND<2	ND<2	ND<2	---	10	<2	10	100	
Trichlorofluoromethane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Trichloropropane	ND<2	ND<2	ND<2	---	---	<2	---	---	
Vinyl chloride	ND<2	ND<2	ND<2	---	---	<2	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics

SW Method 8010

EPA Method 601

ES Job No. 56394

Lab Sample No. 35730-6

Client

Field Sample No. DW3-1-ITC

Project AF Plant 42

Date Collected 1-30-86

Client No.

Date Received 1-31-86

Laboratory Supervisor Approval:

Date Analyzed 2-3-86

QC Report No. 8010-13

Sample Matrix:

☒ Water (ug/L)

Dilution Factor N/A

☐ Soil

\*Moisture %

☐ Other

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	ND<2	---	---	---	
Bromoform	2	ND<2	---	---	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	ND<2	---	---	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	ND<2	---	---	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	ND<2	---	---	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	ND<2	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW3-1-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	ND<2	---	---	---	
1,2-Dichloroethane	2	ND<2	---	---	---	
1,1-Dichloroethylene	2	ND<2	---	---	---	
trans-1,2-dichloroethylene	2	ND<2	---	---	---	
Dichloromethane	2	ND<2	---	---	---	
1,2-Dichloropropane	2	ND<2	---	---	---	
1,3-Dichloropropylene	2	ND<2	---	---	---	
1,1,2,2-Tetrachloroethane	2	ND<2	---	---	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	ND<2	---	---	---	
1,1,1-Trichloroethane	2	ND<2	---	---	---	
1,1,2-Trichloroethane	2	ND<2	---	---	---	
Trichloroethylene	2	ND<2	---	---	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics

~~SW Method 8010~~

*EPA Method 601*

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-8  
Field Sample No. DW8-1-ITC  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-3-86  
QC Report No. 8010-13

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	ND<2	---	---	---	
Bromoform	2	ND<2	---	---	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	ND<2	---	---	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	ND<2	---	---	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	ND<2	---	---	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	ND<2	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW8-1-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	ND<2	---	---	---	
1,2-Dichloroethane	2	ND<2	---	---	---	
1,1-Dichloroethylene	2	ND<2	---	---	---	
trans-1,2-dichloroethylene	2	ND<2	---	---	---	
Dichloromethane	2	ND<2	---	---	---	
1,2-Dichloropropane	2	ND<2	---	---	---	
1,3-Dichloropropylene	2	ND<2	---	---	---	
1,1,2,2-Tetrachloroethane	2	ND<2	---	---	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	ND<2	---	---	---	
1,1,1-Trichloroethane	2	ND<2	---	---	---	
1,1,2-Trichloroethane	2	ND<2	---	---	---	
Trichloroethylene	2	ND<2	---	---	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics

~~SW Method 8010~~

EPA Method 601

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-7  
Field Sample No. DW1-1-ITC  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-3-86  
QC Report No. 8010-13

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	ND<2	---	---	---	
Bromoform	2	ND<2	---	---	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	ND<2	---	---	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	ND<2	---	---	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	ND<2	---	---	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	ND<2	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW1-1-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	ND<2	---	---	---	
1,2-Dichloroethane	2	ND<2	---	---	---	
1,1-Dichloroethylene	2	ND<2	---	---	---	
trans-1,2-dichloroethylene	2	ND<2	---	---	---	
Dichloromethane	2	ND<2	---	---	---	
1,2-Dichloropropane	2	ND<2	---	---	---	
1,3-Dichloropropylene	2	ND<2	---	---	---	
1,1,2,2-Tetrachloroethane	2	ND<2	---	---	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	ND<2	---	---	---	
1,1,1-Trichloroethane	2	ND<2	---	---	---	
1,1,2-Trichloroethane	2	ND<2	---	---	---	
Trichloroethylene	2	ND<2	---	---	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics

~~SW Method 8010~~  
EPA Method 801

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-3  
Field Sample No. DW3-1-ITC DUP.  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-6-86  
QC Report No. 8010-13

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	ND<2	---	---	---	
Bromoform	2	ND<2	---	---	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	ND<2	---	---	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	ND<2	---	---	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	ND<2	---	---	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	ND<2	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW3-1-ITC DWP.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	ND<2	---	---	---	
1,2-Dichloroethane	2	ND<2	---	---	---	
1,1-Dichloroethylene	2	ND<2	---	---	---	
trans-1,2-dichloroethylene	2	ND<2	---	---	---	
Dichloromethane	2	ND<2	---	---	---	
1,2-Dichloropropane	2	ND<2	---	---	---	
1,3-Dichloropropylene	2	ND<2	---	---	---	
1,1,2,2-Tetrachloroethane	2	ND<2	---	---	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	ND<2	---	---	---	
1,1,1-Trichloroethane	2	ND<2	---	---	---	
1,1,2-Trichloroethane	2	ND<2	---	---	---	
Trichloroethylene	2	ND<2	---	---	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics

~~SW Method 8010~~  
*EPA Method 601*

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-4  
Field Sample No. DW3-1-ITC SPIKE  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-6-86  
QC Report No. 8010-13

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	12	---	13.8	---	
Bromoform	2	9.5	---	19.2	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	11	---	13.3	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	11	---	23.8	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	11	---	11.0	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	34	---	16.6	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW3-1-ITC SPIKE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	11	---	9.8	---	
1,2-Dichloroethane	2	11	---	11.8	---	
1,1-Dichloroethylene	2	12	---	8.7	---	
trans-1,2-dichloroethylene	2	11	---	10.6	---	
Dichloromethane	2	6.5	---	6.0	---	
1,2-Dichloropropane	2	10	---	15.1	---	
1,3-Dichloropropylene	2	34	---	16.6	---	
1,1,2,2-Tetrachloroethane	2	21	---	21.4	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	21	---	21.4	---	
1,1,1-Trichloroethane	2	9.3	---	13.0	---	
1,1,2-Trichloroethane	2	34	---	16.6	---	
Trichloroethylene	2	10	---	15.9	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

\* - If % Moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

Lap Sample Nos. DW1-1-ITC  
Duplicates 35370-10, 35370-5  
Spike 35370-6

QC Report No. 602-13  
Date Analyzed 2-4-86  
Laboratory Supervisor Approval:

Sample Matrix:

☒ Water (ug/L)

☐ Soil (ug/Kg)

☐ Other

Dilution Factor N/A

\*Moisture N/A %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND<1	ND<1	ND<1	---	10	<1	14	140	
Chlorobenzene	ND<1	ND<1	ND<1	---	10	<1	11	110	
1,2-Dichlorobenzene	ND<1	ND<1	ND<1	---	11	<1	11	100	
1,3-Dichlorobenzene	ND<1	ND<1	ND<1	---	13	<1	13	100	
1,4-Dichlorobenzene	ND<1	ND<1	ND<1	---	10	<1	10	100	
Ethyl benzene	ND<1	ND<1	ND<1	---	11	<1	11	110	
Toluene	ND<1	ND<1	ND<1	---	10	<1	6.4	64	
Xylenes (Dimethyl benzene)	ND<1	ND<1	ND<1	---	---	<1	---	---	

\* - If % Moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-10  
Field Sample No. Dw1-1-ITC  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-3-86  
QC Report No. 602-13

Sample Matrix:

☒ Water (ug/L)  
☐ Soil  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
Xylenes (Dimethyl benzene)	1	---	---	---	---	

\* - If % Moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client                       
Project AF Plant 42  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 35730-5  
Field Sample No. DW1-1-ITC DUP.  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-4-86  
QC Report No. 602-13

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other                     

Dilution Factor N/A

\*Moisture N/A %

Spike Source                     

Compound						Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
Xylenes (Dimethyl benzene)	1	---	---	---	---	

\* - If % Moisture is reported, results are presented on a dry wt.

ND - This compound was not detected; the limit of detection is less than the amount stated in the table above.



AD-A198 943

INSTALLATION RESTORATION PROGRAM PHASE 2

3/7

CONFIRMATION/QUANTIFICATION STAG. (U)

ENGINEERING-SCIENCE INC PASADENA CALIF

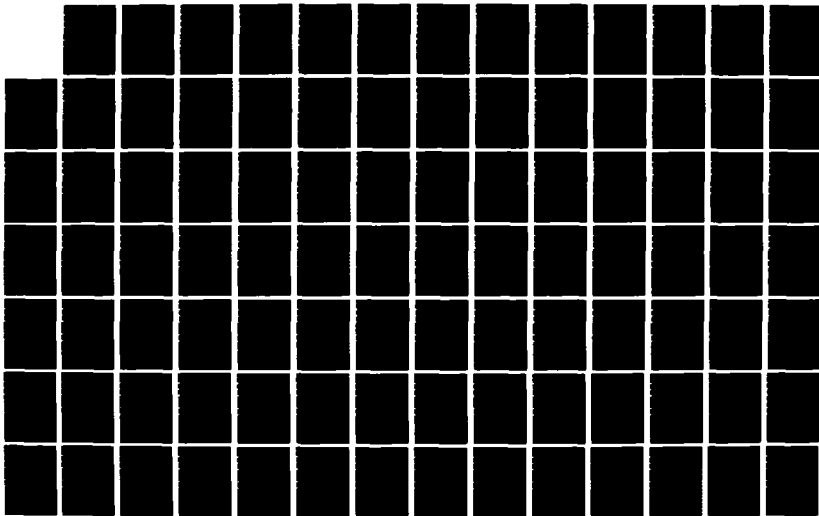
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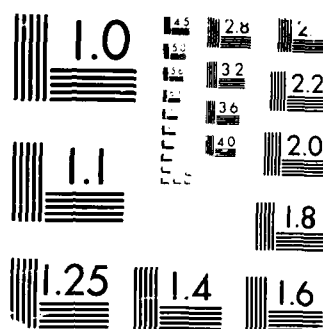
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1010A

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-6  
Field Sample No. DW1-1-ITC SPIKE  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-4-86  
QC Report No. 602-13

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	14	---	2.6	---	
Chlorobenzene	1	11	---	8.0	---	
1,2-Dichlorobenzene	1	11	---	14.6	---	
1,3-Dichlorobenzene	1	13	---	13.0	---	
1,4-Dichlorobenzene	1	10	---	12.8	---	
Ethyl benzene	1	11	---	7.5	---	
Toluene	1	6.4	---	4.9	---	
Xylenes (Dimethyl benzene)	1	---	---	---	---	

\* - If % Moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-11  
Field Sample No. DW3-1-ITC  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-3-86  
QC Report No. 602-13

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
Xylenes (Dimethyl benzene)	1	---	---	---	---	

\* - If % Moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35730-8  
Field Sample No. DW8-1-ITC  
Date Collected 1-30-86  
Date Received 1-31-86  
Date Analyzed 2-3-86  
QC Report No. 602-13

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
Xylenes (Dimethyl benzene)	1	---	---	---	---	

\* - If % Moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Dennis R. Kasper

Page 1 of 10

February 3, 1986

56394

35742/lac

#### REVISED REPORT

Two (2) water samples:

<u>Sample name</u>	<u>Date</u>	<u>Time</u>
FW2B-ITC	1-31-86	0830
FW1-ITC	1-31-86	0930

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 601.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 602. The results are listed on the following summary sheets.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director

Engineering Science  
Page 2

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35742-4  
Field Sample No. FW2B-ITC  
Date Collected 1-31-86  
Date Received 2-3-86  
Date Analyzed 2-3-86  
QC Report No. 601-13

Sample Matrix:

☒ / Water (ug, L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	ND<2	---	---	---	
Bromoform	2	ND<2	---	---	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	ND<2	---	---	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	ND<2	---	---	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	ND<2	---	---	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	ND<2	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

FW2B-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	ND<2	---	---	---	
1,2-Dichloroethane	2	ND<2	---	---	---	
1,1-Dichloroethylene	2	ND<2	---	---	---	
trans-1,2-dichloroethylene	2	ND<2	---	---	---	
Dichloromethane	2	ND<2	---	---	---	
1,2-Dichloropropane	2	ND<2	---	---	---	
1,3-Dichloropropylene	2	ND<2	---	---	---	
1,1,2,2-Tetrachloroethane	2	ND<2	---	---	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	ND<2	---	---	---	
1,1,1-Trichloroethane	2	ND<2	---	---	---	
1,1,2-Trichloroethane	2	ND<2	---	---	---	
Trichloroethylene	2	ND<2	---	---	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35742-5  
Field Sample No. FW1-ITC  
Date Collected 1-31-86  
Date Received 2-3-86  
Date Analyzed 2-3-86  
QC Report No. 601-13

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	2	ND<2	---	---	---	
Bis(2-Chloroethoxy)methane	2	ND<2	---	---	---	
Bis(2-chloroisopropyl)ether	2	ND<2	---	---	---	
Bromobenzene	2	ND<2	---	---	---	
Bromodichloromethane	2	ND<2	---	---	---	
Bromoform	2	ND<2	---	---	---	
Bromomethane	2	ND<2	---	---	---	
Carbon tetrachloride	2	ND<2	---	---	---	
Chloroacetaldehyde	2	ND<2	---	---	---	
Chloral	2	ND<2	---	---	---	
Chlorobenzene	2	ND<2	---	---	---	
Chloroethane	2	ND<2	---	---	---	
Chloroform	2	ND<2	---	---	---	
1-Chlorohexane	2	ND<2	---	---	---	
2-Chloroethyl vinyl ether	2	ND<2	---	---	---	
Chloromethane	2	ND<2	---	---	---	
Chloromethyl methyl ether	2	ND<2	---	---	---	
Chlorotoluene	2	ND<2	---	---	---	
Dibromochloromethane	2	ND<2	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

FW1-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	2	ND<2	---	---	---	
Dichlorodifluoromethane	2	ND<2	---	---	---	
1,1-Dichloroethane	2	ND<2	---	---	---	
1,2-Dichloroethane	2	ND<2	---	---	---	
1,1-Dichloroethylene	2	ND<2	---	---	---	
trans-1,2-dichloroethylene	2	ND<2	---	---	---	
Dichloromethane	2	ND<2	---	---	---	
1,2-Dichloropropane	2	ND<2	---	---	---	
1,3-Dichloropropylene	2	ND<2	---	---	---	
1,1,2,2-Tetrachloroethane	2	ND<2	---	---	---	
1,1,1,2-Tetrachloroethane	2	ND<2	---	---	---	
Tetrachloroethylene	2	ND<2	---	---	---	
1,1,1-Trichloroethane	2	ND<2	---	---	---	
1,1,2-Trichloroethane	2	ND<2	---	---	---	
Trichloroethylene	2	ND<2	---	---	---	
Trichlorofluoromethane	2	ND<2	---	---	---	
Trichloropropane	2	ND<2	---	---	---	
Vinyl chloride	2	ND<2	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

Lab Sample Nos. FW2B-ITC

Duplicates 35742-7, 35742-3

Spike 35742-8

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil (ug/Kg)

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

QC Report No. 602-14

Date Analyzed 2-4-86

Laboratory Supervisor Approval: \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND<1	ND<1	ND<1	---	10	<1	12	120	
Chlorobenzene	ND<1	ND<1	ND<1	---	11	<1	12	109	
1,2-Dichlorobenzene	ND<1	ND<1	ND<1	---	12	<1	<del>12</del> 12	<del>100</del> 117	
1,3-Dichlorobenzene	ND<1	ND<1	ND<1	---	12	<1	<del>12</del> 12	<del>100</del> 100	
1,4-Dichlorobenzene	ND<1	ND<1	ND<1	---	11	<1	<del>12</del> 11	<del>109</del> 100	
Ethyl benzene	ND<1	ND<1	ND<1	---	10	<1	12	120	
Toluene	ND<1	ND<1	ND<1	---	10	<1	13	130	
Xylenes (Dimethyl benzene)	ND<1	ND<1	ND<1	---	--	<1	--	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35742-3  
Field Sample No. FW2B-ITC  
Date Collected 1-30-86  
Date Received 2-3-86  
Date Analyzed 2-4-86  
QC Report No. 602-14

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
xylene (Dimethyl benzene)	1	ND<1	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35742-4  
Field Sample No. FW1-ITC  
Date Collected 1-30-86  
Date Received 2-3-86  
Date Analyzed 2-4-86  
QC Report No. 602-14

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
Xylenes (Dimethyl benzene)	1	ND<1	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35742-7  
Field Sample No. FW2B-ITC Dup  
Date Collected 1-30-86  
Date Received 2-3-86  
Date Analyzed 2-4-86  
QC Report No. 602-14

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	ND<1	---	---	---	
Chlorobenzene	1	ND<1	---	---	---	
1,2-Dichlorobenzene	1	ND<1	---	---	---	
1,3-Dichlorobenzene	1	ND<1	---	---	---	
1,4-Dichlorobenzene	1	ND<1	---	---	---	
Ethyl benzene	1	ND<1	---	---	---	
Toluene	1	ND<1	---	---	---	
Xylenes (Dimethyl benzene)	1	ND<1	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35742-8  
Field Sample No. FW2B-ITC SPIKE  
Date Collected 1-30-86  
Date Received 2-3-86  
Date Analyzed 2-4-86  
QC Report No. 602-14

Sample Matrix:

☒ /X/ Water (ug/L)

☐ / Soil

☐ / Other                                 

Dilution Factor N/A

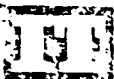
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1	12	---	2.6	---	
Chlorobenzene	1	12	---	8.0	---	
1,2-Dichlorobenzene	1	12	---	14.5	---	
1,3-Dichlorobenzene	1	12	---	12.9	---	
1,4-Dichlorobenzene	1	12	---	12.7	---	
Ethyl benzene	1	12	---	7.4	---	
Toluene	1	12	---	4.9	---	
Xylenes (Dimethyl benzene)	1	12	---	---	---	

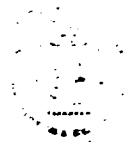
ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES



### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 536  
Arcadia, CA 91006

October 8, 1986

Attn: Mark A. Guthrie

Page 1 of 26

February 5, 1986

56394

35778/lac

#### REVISED REPORT

Four (4) soil samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
16-EVP3-SB1-SS2-2.5-ITC	2-3-86	0900
16-EVP3-SB1-SS5-10-ITC	2-3-86	0900
16-EVP3-SB1-SS10-30-ITC	2-3-86	0900
16-EVP3-SB1-SS14-50-ITC	2-3-86	0900

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to soluble CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Micrograms Per Milliliter(ug/ml). Unable to do spikes on a soluble extract without changing the extraction conditions. The cyanides were distilled and determined by Standard Methods 412B and 412E. The results are listed in the following Metals and Environmental Quality Parameters summary sheets.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director



## Sample Matrix:

/ / Water (ug/L)

/X/ Soil (ug/mi)

/ / Other

Spike Source(s)

Dilution Factor

\*Moisture

QC Report No. 66700-1

Laboratory Supervisor Approval:

Analyte Metal	Laboratory Duplicates	Sample Nos.		Date Anal.	** Anal. Method	Blank	Duplicates				Spiked Recovery		
		Duplicates	Spike				C1	C2	RPD	SA	SR	SSR	PR
Arsenic	35778-4A&B	NA	NA	2-11	G	NA	ND< 0.03	ND< 0.03	---	---	---	---	---
Barium	35778-4A&B	NA	NA	2-11	P	NA	2.3 ND<	2.3 ND<	0	---	---	---	---
Cadmium	35778-4A&B	NA	NA	2-11	P	NA	0.03 ND<	0.03 ND<	---	---	---	---	---
Chromium	35778-4A&B	NA	NA	2-11	P	NA	0.06 ND<	0.06 ND<	---	---	---	---	---
Lead	35778-4A&B	NA	NA	2-11	P	NA	ND<0.2	ND<0.2	---	---	---	---	---
Mercury	35778-4A&B	NA	NA	2-11	C	NA	0.012 ND<	0.008 ND<	40	---	---	---	---
Selenium	35778-4A&B	NA	NA	2-11	G	NA	0.003 ND<	0.003 ND<	---	---	---	---	---
Silver	35778-4A&B	NA	NA	2-11	P	NA	0.03 ND<	0.03 ND<	---	---	---	---	---
Nickel	35778-4A&B	NA	NA	2-11	P	NA	0.1 ND<	0.1 ND<	0	---	---	---	---

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

ANALYTICAL RESULTS SUMMARY  
Environmental Quality Parameters

Page: 4  
Job #35778

QC Report No. 412E-1

## Laboratory Supervisor Approval:

Sample Matrix:

/ / water (ug/L)

Soil (mg/kg)

Other /

Field Sample No.	Lab Sample No.	Cn
16-EVP3-SB1-SS2- 2.5-IIC	35778-1	0.65
16-EVP3-SB1-SS5- 10-IIC	35778-2	ND<0.5
16-EVP3-SB1-SS10- 30-IIC	35778-3	ND<0.5
16-EVP3-SB1-SS14- 50-IIC	35778-4	ND<0.5
Date Analyzed	M D	2/6
Analytical Method	**	412E

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

## QUALITY CONTROL RESULTS SUMMARY

Page: 5  
Job #35788

/ / Water (ug/L)

Soil (ug/g)

/ / Other

Spike Source(s)

Dilution Factor

**\*Moisture**

QC Report No. 412E-1

Laboratory Supervisor Approval:

~~ITT CORPORATION~~

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

Engineering Science  
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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 16-EVP3-SB1-SS2-2.5-ITC

Duplicates 35778-9, 35778-10

Spike 35778-12

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Spike Source

QC Report No. 8010-14

Date Analyzed 2-10-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Bis(2-chloroisopropyl)ether	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Bromobenzene	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Bromodichloromethane	ND.010	ND.010	ND.010	---	0.05	<0.010	0.057	114	
Bromoform	ND.010	ND.010	ND.010	---	0.05	<0.010	0.083	166	
Bromomethane	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Carbon tetrachloride	ND.010	ND.010	ND.010	---	0.05	<0.010	0.048	96	
Chloroacetaldehyde	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Chloral	ND.010	ND.010	ND.010	---	---	<0.010	---	---	---
Chlorobenzene	ND.010	ND.010	ND.010	---	0.05	<0.010	0.046	92	
Chloroethane	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Chloroform	ND.010	ND.010	ND.010	---	0.05	<0.010	0.049	98	
1-Chlorohexane	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Chloromethane	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Chlorotoluene	ND.010	ND.010	ND.010	---	---	<0.010	---	---	
Dibromochloromethane	ND.010	ND.010	ND.010	---	0.18	<0.010	0.20	111	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB.-SS2-2.5-170

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.051	102	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.035	70	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.045	90	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.059	118	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.070	<0.010	0.072	103	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.199	114	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.092	92	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.092	92	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.049	98	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.199	114	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.046	92	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-9  
Field Sample No. 16-EVP3-SB1-SS2-2.5-ITC  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-10-86  
QC Report No. 8010-14

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB1-SS2-2.5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-10 DUP.  
Field Sample No. 16-EVP3-SB1-SS2-2.5-ITC  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-10-86  
QC Report No. 8010-14

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB1-SS2-2.5-ITC DUP.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-12 SPIKE  
Field Sample No. 16-EVP3-SB1-SS2-2.5-ITC  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-10-86  
QC Report No. 8010-14

## Sample Matrix:

☐ Water (ug/L)☒ Soil (ug/g)☐ Other \_\_\_\_\_Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.057	---	13.9	---	
Bromoform	0.010	0.083	---	19.3	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.048	---	13.5	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.046	---	24.0	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.049	---	11.1	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.199	---	16.7	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB1-SS2-2.5-ITC SPIKE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.048	---	9.9	---	
1,2-Dichloroethane	0.010	0.051	---	11.8	---	
1,1-Dichloroethylene	0.010	0.035	---	8.7	---	
trans-1,2-dichloroethylene	0.010	0.045	---	10.6	---	
Dichloromethane	0.010	0.059	---	6.1	---	
1,2-Dichloropropane	0.010	0.072	---	15.2	---	
1,3-Dichloropropylene	0.010	0.199	---	16.7	---	
1,1,2,2-Tetrachloroethane	0.010	0.092	---	21.5	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.092	---	21.5	---	
1,1,1-Trichloroethane	0.010	0.049	---	13.1	---	
1,1,2-Trichloroethane	0.010	0.199	---	16.7	---	
Trichloroethylene	0.010	0.046	---	16.0	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-2B  
Field Sample No. 16-EVP3-SB1-SS5-10-ITC  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-7-86  
QC Report No. 8010-14

## Sample Matrix:

☐ / Water (ug/L)☒ / Soil (ug/g)☐ / Other \_\_\_\_\_Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB1-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-11  
Field Sample No. 16-EVP3-SB1-SS10-30-ITC  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-10-86  
QC Report No. 8010-14

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB1-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-4  
Field Sample No. 16-EVP3-SB1-SS14-50-ITC  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-7-86  
QC Report No. 8010-14

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB1-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Laboratory Sample Nos. 16-EVP3-SB1-SS14-50-ITC

QC Report No. 8020-15

Duplicates 35778-6, 35778-5

Date Analyzed 2-10-86

Spike 35778-6

Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)

Dilution Factor N/A

☒ Soil (ug/g)

\*Moisture

☐ Other

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	0.005	0.068	130	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	0.005	0.072	129	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	0.005	0.067	126	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	0.005	0.080	124	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	0.005	0.067	129	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	0.005	0.065	125	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	0.005	0.0105	210	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	0.005	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35778-4  
Field Sample No. 16-EVP3-SB1-SS2-2.5-17  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-7-86  
QC Report No. 8020-15

Sample Matrix:  
☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                 

Spoke Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-5  
Field Sample No. 16-EVP3-SB1-SS5-10-170  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-7-86  
QC Report No. 8020-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N.A.

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Lac Sample No. 35778-7  
Field Sample No. 16-EVP3-SB1-SS10-3C-111  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-7-86  
QC Report No. 8020-15

Dilution Factor N/A

\*Moisture                      %

Spoke Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
Sw Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35778-6  
Field Sample No. 16-EVP3-SB1-SS14-50-550  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-7-86  
QC Report No. 8020-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35778-5 DUF  
Field Sample No. 16-EVP3-SB1-S314-50-17C  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-10-86  
QC Report No. 8020-15

Sample Matrix:  
☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35778-6 SP16  
Field Sample No. 16-EVP3-SB1-SS14-50-170  
Date Collected 2-3-86  
Date Received 2-5-86  
Date Analyzed 2-10-86  
QC Report No. 8020-15

Sample Matrix:  
☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.068	---	2.6	---	
Chlorobenzene	0.005	0.072	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.067	---	14.6	---	
1,3-Dichlorobenzene	0.005	0.080	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.068	---	12.8	---	
Ethyl benzene	0.005	0.065	---	7.4	---	
Toluene	0.005	0.105	---	4.9	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
Arcadia, CA 91006

October 8, 1986

Attn: Dennis R. Kasper

Page 1 of 17

February 6, 1986

56394

35790/jgc

#### REVISED REPORT

Four (4) soil samples.

<u>Sample Name</u>	<u>Date</u>	<u>Time</u>
16-EVP3-SB2-SS3-5-ITC	2-3-86	1500
16-EVP3-SB2-SS8-20-ITC	2-3-86	1500
16-EVP3-SB2-SS14-50-ITC	2-5-86	0900
16-EVP3-SB3-SS2-2.5-ITC	2-5-86	1130

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to soluble CAM Title 22 and analyzed by AA and ICP. The samples were analyzed on a soluble basis, therefore they were reported as Microgram Per Milliliter (ug/ml). Unable to do spikes on a soluble extract without changing the extraction conditions. The cyanides were distilled and determined by Standard Methods 412B and 412E. The results are listed in the Metals summary sheets.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

## Engineering-Science

ANALYTICAL RESULTS SUMMARY  
MetalsPage: 2  
Job #35790

ES Job No. 56394

Client

Project No. AF Plant 42-IRP-II

Client No.

Date Collected 2-5-86

Date Received 2-6-86

QC Report No. 66700-2

Laboratory Supervisor Approval:

Dilution Factor

\* Moisture

%

Sample Matrix:

/ / Water (ug/L)

/X/ Soil (ug/ml)

/ / Other

Field Sample No.	Lab Sample No	As	Ba	Cd	Cr	Pb	Hg	Se	Ag	Ni
16-EVP3-SB3-SS2-2.5-ITC	35790-1	ND<0.03	3.5	ND<0.03	ND<0.06	ND<0.2	ND<0.001	ND<0.003	ND<0.03	0.5
16-EVP3-SB2-SS3-5-ITC	35790-2	ND<0.03	3.6	ND<0.03	ND<0.06	ND<0.2	ND<0.001	ND<0.003	0.6	3.3
16-EVP3-SB2-SS8-20-ITC	35790-3	ND<0.03	6.1	ND<0.03	ND<0.06	ND<0.2	ND<0.001	ND<0.003	ND<0.03	0.2
16-EVP3-SB2-SS14-50-ITC	35790-4a	ND<0.03	2.3	ND<0.03	ND<0.06	ND<0.2	ND<0.001	ND<0.003	0.03	0.1
Date Analyzed	M 2 D 10	2	14	2	14	2	2	2	2	2
Analytical Method	**	G	P	P	P	P	C	G	P	P

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

F = Flame AAS C = Cold Vapor AAS G = Graphite Furnace AAS  
H = Hydride Vapor AAS P = Inductively Coupled Plasma

## Sample Matrix:

/ / Water (ug/L)

/X/ Soil (ug/ml)

/ / Other

QC Report No. 66700 2

Laboratory Supervisor Approval

Dilution Factor

\*Moisture

Spike Source(s)

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal.	** Anal. Method	Blank	Duplicates CJ	C2	RFD	5A	Spike Recovery SR	PR
Arsenic	35790-4a&b	N/A	2/10	G	N/A	ND< 0.03	ND< 0.03	---			
Barium	35790-4a&b	N/A	2/14	P	N/A	2.3 ND<	1.9 ND<	19			
Cadmium	35790-4a&b	N/A	2/14	P	N/A	0.03 ND<	0.03 ND<	---			
Chromium	35790-4a&b	N/A	2/14	P	N/A	0.06 ND<	0.06 ND<	---			
Lead	35790-4a&b	N/A	2/14	P	N/A	0.2 ND<	0.2 ND<	---			
Mercury	35790-4a&b	N/A	2/14	C	N/A	ND< 0.001 0.01	ND< 0.001 0.01	---			
Selenium	35790-4a&b	N/A	2/11	G	N/A	ND< 0.003	ND< 0.003	---			
Silver	35790-4a&b	N/A	2/14	P	N/A	0.03 ND<	0.03 ND<	---			
Nickel	35790-4a&b	N/A	2/14	P	N/A	0.1 ND<	0.1 ND<	---			

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

ES	Job No.	56394
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# Client

Project No. AF Plant 42 IRP-II

Client No.

Date Collected 2-3, 5-86

Date Received 2-6-86

QC Report No. 412E-2

Laboratory Supervisor Approval:

## Dilution Factor

★ Moisture

93

Sample Matrix:

// Water (ug/L)

 $\text{X/Soil } (\mu\text{g/g})$ 

Other /

Field Sample No.	Lab Sample No.	CN
16-EVP3-SB2-SS14- 50'-ITC	35790-4A	ND<0.4
16-EVP3-SB2-SS8- 20'-ITC	35790-3	ND<0.4
16-EVP3-SB2-SS3- 5'-ITC	35790-2	ND<0.4
16-EVP3-SB3-SS2- 2.5'-ITC	35790-1	ND<0.4
Date Analyzed	M D	2/7
Analytical Method	**	412E

\* - If % moisture is reported, results are presented on a Dry-weight basis.

QC Report No. 412F-2

Dilution Factor

\*Moisture

Other

Source(s)

[illegible]LT CORPORATION:

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42-IRP-II

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35790-7

Field Sample No. 16-EVP3-SB2-SS3-5-ITC

Date Collected 2-3-86

Date Received 2-6-86

Date Analyzed 2-11-86

QC Report No. 8010-14

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB2-SS3-5-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Lab Sample No. 35790-8Client Field Sample No. 16-EVP3-SB2-SS14-50-ITCProject AF Plant 42-IRP-IIDate Collected 2-5-86Client No. Date Received 2-6-86Laboratory Supervisor Approval: Date Analyzed 2-11-86QC Report No. 8010-14

Sample Matrix:

☐ Water (ug/L)Dilution Factor N/A☒ Soil (ug/g)\*Moisture  %☐ Other Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB2-SS14-50-110

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42-IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35790-9  
Field Sample No. 16-EVP3-SB3-SS2-2.5-ITC  
Date Collected 2-5-86  
Date Received 2-6-86  
Date Analyzed 2-11-86  
QC Report No. 8010-14

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB3-SS2-2.5-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42-IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35790-10  
Field Sample No. 16-EVP3-SB2-SS8-20-ITC  
Date Collected 2-3-86  
Date Received 2-6-86  
Date Analyzed 2-11-86  
QC Report No. 8010-14

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB2-SS8-20-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoroethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42-IPP-II

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35790-4

Field Sample No. 16-EVP3-SB2-SS3-5-ITC

Date Collected 2-3-86

Date Received 2-6-86

Date Analyzed 2-12-86

QC Report No. 8020-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor

\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
xylene (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Env. Lab. No. 56394

Lab Sample No. 35790-5

Client AF Plant 42-IRP-II

Field Sample No. 16-EVP3-SB2-SS2-20-ITC

Project AF Plant 42-IRP-II

Date Collected 2-3-86

Client No.

Date Received 2-6-86

Lab. Station Supervisor Approval:

Date Analyzed 2-11-86

QC Report No. 8020-15

Sample Matrix:

Water (ug/L)

Dilution Factor

Soil (ug/g)

\*Moisture

Other

Sample Source

Compound	Concentration			Retention Time		Notes
	Det. Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethylbenzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
1,2,4-Trichlorobenzene	0.005	ND<0.005	---	---	---	

When a compound was not detected, the limit of detection for this analysis is  
greater than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42-IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35790-6  
Field Sample No. 16-EVP3-SB2-SS14-50-100  
Date Collected 2-5-86  
Date Received 2-6-86  
Date Analyzed 2-12-86  
QC Report No. 8020-15

Sample Matrix:

☐ / water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_  
\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Lab Sample No. 35790-4  
Field Sample No. 16-EVP3-SB3-SS2-2.5-170  
Date Collected 2-5-86  
Date Received 2-6-86  
Date Analyzed 2-11-86  
QC Report No. 8020-15

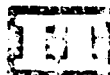
Dilution Factor \_\_\_\_\_  
\*Moisture \_\_\_\_\_

## Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	0.009	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Mark Guthrie

Page 1 of 26

February 7, 1986

56394

35802/lac

#### REVISED REPORT

Four (4) soil samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
16-EVP3-SB4-SS5-10-ITC	2-5-86	1530
16-EVP3-SB4-SS10-30-ITC	2-5-86	1530
16-EVP3-SB4-SS15-10-ITC	2-5-86	1530
16-EVP3-SB4-SS14-50-ITC	2-6-86	0830

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to soluble CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Micrograms Per Milliliter(ug/ml). Unable to do spikes on a soluble extract without changing the extraction conditions. The cyanides were distilled and determined by Standard Methods 412B and 412E. The results are listed in the following Metals and Environmental Quality Parameters summary sheets.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director





ES Job No. 56394

Client

Project No. AF Plant 42 IRP II

Client No.

Date Collected 2-5, 6-86

Date Received 2-7-86

Sample Matrix:

// Water (ug/L)

/X/ Soil (ug/g)

Other.

QC Report No. 412F-3  
Laboratory Supervisor Approval:Dilution Factor

\* Moisture

[illegible]

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.



X/soil (ug/g)

Spike Source(s)

**\*Moisture**

Laboratory Supervisor Approval:

[illegible]

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

Engineering Science  
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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 15 BVP3-GB4-SS5-10-ITC

Duplicates 35802-14, 35802-15

Spike 35802-16

Sample Matrix:

Water (ug/L)

Soil (ug/g)

Other

Spike Source

QC Report No. 8010-15

Date Analyzed

Laboratory Supervisor Approval:

Dilution Factor NA

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
bis(2-Chloroethoxy)methane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
bis(2-chloroisopropyl)ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Bromobenzene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Bromodichloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	0.050	<0.010	0.038	76	
Bromoform	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	0.050	<0.010	0.055	110	
Bromomethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Carbon tetrachloride	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	0.050	<0.010	0.029	58	
Chloroacetaldehyde	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Chloroal	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Chlorobenzene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	0.050	<0.010	0.035	70	
Chloroethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Chloroform	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	0.050	<0.010	0.041	82	
1-Chlorohexane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Chloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Chlorotoluene	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	---	<0.010	---	---	
Dibromodichloromethane	ND <sub>610</sub>	ND <sub>610</sub>	ND <sub>610</sub>	---	0.175	<0.010	0.150	85	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

16-EVP3-SB4-SS5-10-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.033	66	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.030	60	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.039	78	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.032	64	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.031	62	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.070	<0.010	0.055	79	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.150	86	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.077	77	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.077	77	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.031	62	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.150	85	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.037	74	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35802-11  
Field Sample No. 16-EVP3-SB4-SS10-30-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-11-86  
QC Report No. 8010-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor NA  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

16-EVP3-SB4-SS10-30-17

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Client Project AF Plant 42 IRP IIClient No. Laboratory Supervisor Approval: Lab Sample No. 35802-12Field Sample No. 16-EVP3-SB4-SS14-50-ITCDate Collected 2-6-86Date Received 2-7-86Date Analyzed 2-11-86QC Report No. 8010-15

Sample Matrix:

☐ Water (ug/L)☒ Soil (ug/g)☐ Other Dilution Factor NA\*Moisture  %Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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16-EV93-SB4-SS14-7

If no signal was detected; the limit of detection for this analysis is 0.06 mg/kg as stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35802-13  
Field Sample No. 16-EVP3-SB4-SS15-10-170  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-11-86  
QC Report No. 8010-15

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor NA

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB4-SS15-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35802-14  
Field Sample No. 16-EVP3-SB4-SS5-10-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-11-86  
QC Report No. 8010-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor NA

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

16-EVP3-SB4-SS5-10-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client   
Project AF Plant 42 IRP II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 35802-15 DCP  
Field Sample No. 16-EVP3-SB4-SS5-10-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-11-86  
QC Report No. 8010-15

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Dilution Factor NA  
\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB4-SS5-10-ITC Det.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35802-16 SPIKE  
Field Sample No. 16-EVP3-SB4-SS5-10-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-11-86  
QC Report No. 8010-15

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor NA  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.038	---	13.9	---	
Bromoform	0.010	0.039	---	19.2	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.029	---	13.5	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.035	---	24.0	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.041	---	11.1	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.150	---	16.7	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
halogenated Volatile Organics  
SW Method 8010

16-EVP3-S54-SS5-10-ITC SP149

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.033	---	9.9	---	
1,2-Dichloroethane	0.010	0.030	---	11.6	---	
1,1-Dichloroethylene	0.010	0.039	---	8.7	---	
trans-1,2-dichloroethylene	0.010	0.033	---	10.6	---	
Dichloromethane	0.010	0.031	---	6.1	---	
1,2-Dichloropropane	0.010	0.055	---	15.2	---	
1,3-Dichloropropylene	0.010	0.150	---	16.7	---	
1,1,2,2-Tetrachloroethane	0.010	0.077	---	21.5	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.077	---	21.5	---	
1,1,1-Trichloroethane	0.010	0.031	---	12.6	---	
1,1,2-Trichloroethane	0.010	0.150	---	16.7	---	
Trichloroethylene	0.010	0.036	---	16.8	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 16-EVP-SB4-SS15-10-ITC

QC Report No. 8020-15A

Duplicates 35802-5, 35802-6

Date Analyzed 2-13-86

Spike 35802-7

Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)

Dilution Factor NA

☒ Soil (ug/g)

\*Moisture

☐ Other

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	ND< 0.005	0.042	80	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.055	100	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	ND< 0.005	0.053	100	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	ND< 0.005	0.063	98	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	ND< 0.005	0.050	96	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	ND< 0.005	0.048	92	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	ND< 0.005	0.041	82	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	ND< 0.005	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 5E394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35802-5  
Field Sample No. 16-EVP3-SB4-SS15-10-17  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-13-86  
QC Report No. 8020-15A

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor NA  
\*Moisture \_\_\_\_\_%

Sample Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

## Sw Method 8020

ES Doc. No. 56394

Chart

Project AF Plant 42 IMP-II

Client Ac. \_\_\_\_\_

Laboratory Supervisor Approval:

Sample Matrix:

water (ug/l)

\* Sent Aug 9)

Other

Lab Sample No. 35802-6 D.J.

Field Sample No. 16-EVP3-SB4-SS15-10-170

Date Collected 2-5-26

Date Received 2-7-86

Date Analyzed 2-13-86

QC Report No. 8020-15A

Dilution Factor NA

\*Moisture \_\_\_\_\_ 5

Spoke Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

less than the amount stated in the table above.

## Sw Method 8020

Laboratory Supervisor Approval:

QC Report No. 8020-154

Sample Matrix:

WATER (Lg.)

$$X_{\text{max}} = S_{\text{out}} \cdot (Lg + g)$$

Other

Dilution Factor NA

\*Moisture \_\_\_\_\_

Spike Source

Compound	Concentration			Retention Time		Notes
	Det. Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.042	---	2.6	---	
Chlorobenzene	0.005	0.055	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.053	---	14.6	---	
1,3-Dichlorobenzene	0.005	0.063	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.050	---	12.6	---	
Ethyl benzene	0.005	0.048	---	7.5	---	
Toluene	0.005	0.041	---	4.9	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35802-4  
Field Sample No. 16-EVP3-SB4-SS5-10-1  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-13-86  
QC Report No. 8020-15A

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor NA  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Diethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected, the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35802-8  
Field Sample No. 16-EVP3-SB4-SS10-30-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-12-86  
QC Report No. 8020-15A

## Sample Matrix:

☐ Water (ug/L)☒ Soil (ug/g)☐ Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Dilution Factor NA  
\*Moisture \_\_\_\_\_%

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

TR - Trace, this compound was present, but was below the level at which concentration could be determined.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35802-7  
Field Sample No. 16-EVP3-SB4-SS14-50-17  
Date Collected 2-6-86  
Date Received 2-7-86  
Date Analyzed 2-12-86  
QC Report No. 8020-15

Sample Matrix:

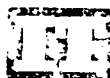
☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor NA  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
Arcadia, CA 91006

October 8, 1986

Attn: Mark Guthrie

Page 1 of 20

February 7, 1986

56394

35803/lac

#### REVISED REPORT

Four (4) soil samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
16-EVP3-SB3-SS5-10-ITC	2-5-86	1130
16-EVP3-SB3-SS10-30-ITC	2-5-86	1130
16-EVP3-SB3-SS14-50-ITC	2-5-86	1130
16-EVP3-SB4-SS2-2.5-ITC	2-5-86	1530

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to soluble CAM Title 22 and analyzed by AAS and ICP. The samples were analyzed on a soluble basis, therefore they are reported as Micrograms Per Milliliter (ug/ml). Unable to do spikes on a soluble extract without changing the extraction conditions. The cyanides were distilled and determined by Standard Methods 412B and 412E. The results are listed in the following tables.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director









Sample Matrix:

Water (ug/L)

 $(\text{g/gn}) \times 10^5 / \text{X}^7$ 

7 / Other

Spike Source(s)

Dilution Factor

\*Moisture

QC Report No. 4128 4

Laboratory Supervisor Approval:

[illegible]

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Lab Sample No. 35803-5

Client

Field Sample No. 16-EVP3-SB4-SS2-2.5-ITC

Project AF Plant 42 IRP

Date Collected 2-5-86

Client No.

Date Received 2-7-86

Laboratory Supervisor Approval:

Date Analyzed 2-12-86

QC Report No. 8010-15

Sample Matrix:

☐ Water (ug/L)

Dilution Factor N/A

☒ Soil (ug/g)

\*Moisture  %

☐ Other

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB4-SS2-2.5-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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Page 8

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35803-6  
Field Sample No. 16-EVP3-SB3-SS5-10-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-12-86  
QC Report No. 8010-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB3-SS5-10-170

Compound	Concentration			Retention Time		Notes
	Det. Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloropropane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-7  
Field Sample No. 16-EVP3-SB3-SS10-30-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-12-86  
QC Report No. 8010-15

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB3-SS10-3 11

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-8  
Field Sample No. 16-EVP3-SB3-SS14-50-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-12-86  
QC Report No. 8010-15

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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AD-A190 943

INSTALLATION RESTORATION PROGRAM PHASE 2

4/7

CONFIRMATION/QUANTIFICATION STAG (U)

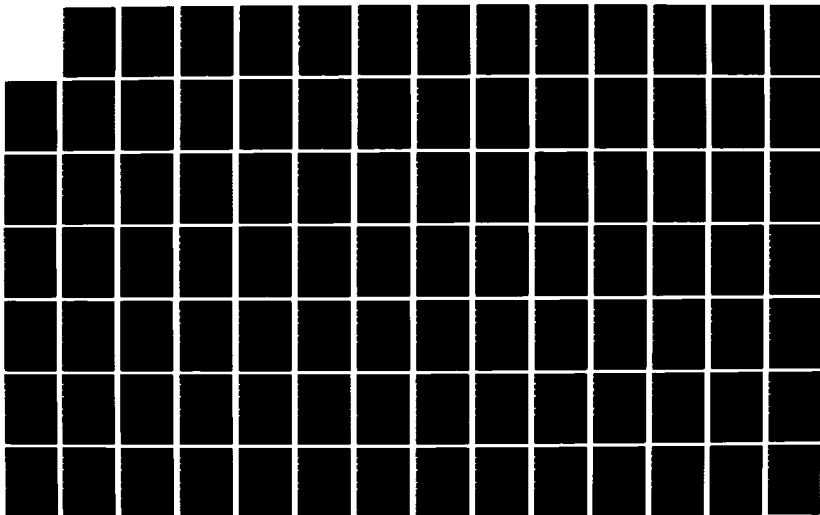
ENGINEERING-SCIENCE INC PASADENA CALIF 28 FEB 87

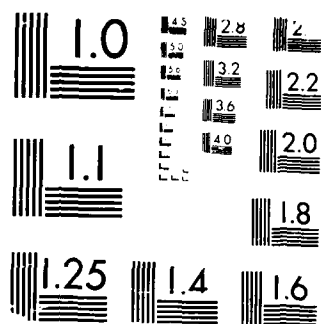
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

16-EVP3-SB3-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 16-EVP3-SB4-SS10-30-ITC  
Duplicates 35803-5, 35803-4 (2-14-86)  
Spike 35803-5

QC Report No. 8020-16  
Date Analyzed 2-14-86, 2-18-86  
Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	<0.005	0.036	69	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	<0.005	0.042	76	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.044	83	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	<0.005	0.049	76	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	<0.005	0.039	75	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	<0.005	0.038	73	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	<0.005	0.041	82	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	<0.005	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-6  
Field Sample No. 16-EVP3-SB3-SS5-10-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-14-86  
QC Report No. 8020-16

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-5  
Field Sample No. 16-EVP3-SB3-SS10-30-17C  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-14-86  
QC Report No. 8020-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-4  
Field Sample No. 16-EVP3-SB3-SS14-50-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-14-86  
QC Report No. 8020-16

Sample Matrix:

☐ / water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-7  
Field Sample No. 16-EVP3-SB4-SS2-2.5-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-14-86  
QC Report No. 8020-16

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-4 DUP.  
Field Sample No. 16-EVP3-SB3-SS10-30-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-18-86  
QC Report No. 8020

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. E56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35803-5 SPIKE  
Field Sample No. 16-EVP3-SB3-SS10-30-ITC  
Date Collected 2-5-86  
Date Received 2-7-86  
Date Analyzed 2-18-86  
QC Report No. 8020-16

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.036	---	2.6	---	
Chlorobenzene	0.005	0.042	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.044	---	14.6	---	
1,3-Dichlorobenzene	0.005	0.049	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.039	---	12.8	---	
Ethyl benzene	0.005	0.038	---	7.4	---	
Toluene	0.005	0.041	---	4.9	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
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## ANALYTICAL SERVICES

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### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: M.A. Guthrie

Page 1 of 17

February 8, 1986

56394

35812/lac

#### REVISED REPORT

Three (3) soil samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
5-AFTC-SB2-SS5-10-ITC	2-7-86	0900
5-AFTC-SB2-SS10-30-ITC	2-7-86	0900
5-AFTC-SB2-SS14-50-ITC	2-7-86	0900

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

The samples were analyzed for total recoverable oil and grease by infrared spectroscopy technique (EPA Method 413.2, Extraction Procedure EPA Method 3550). The results are listed in Table 1.

It is noted that a number of samples covered in this report show substantial concentrations of dichloromethane. At the time these samples were being analyzed, other work being done in the lab involved the use of dichloromethane. We believe the dichloromethane concentrations reported for these samples represent lab air contamination and should not be considered as being part of the samples. Lab procedures have been changed to minimize dichloromethane contamination in the future.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard Z. Mendel*

Eric W. Lindsay  
Laboratory Manager I

Table I

Sample: AF Plant 42 IRP-II, ES Job No. 56394  
Date of Analysis: 3-4-86

Total Recoverable Oil and Grease (ug/g)

5-AFTC-SB2-SS5-10-ITC	7960
5-AFTC-SB2-SS10-30-ITC	1400
5-AFTC-SB2-SS14-50-ITC	2
5-AFTC-SB2-SS14-50-ITC DUP.	2
5-AFTC-SB2-SS14-50-ITC SPIKE	22
Spike Concentration	17

Percent Recovery: 118%

Relative Percent Difference: 0.00%

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 5-AFTC-SB2-SS5-10-ITC

Duplicates 35812-11, 35812-12

Spike 35812-13

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Spike Source

QC Report No. 8010-16

Date Analyzed 2-12-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Bis(2-chloroisopropyl)ether	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Bromobenzene	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Bromodichloromethane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	0.05	<0.010	0.05	100	
Bromoform	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	0.05	<0.010	0.06	112	
Bromomethane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Carbon tetrachloride	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	0.05	<0.010	0.04	80	
Chloroacetaldehyde	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Chloral	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Chlorobenzene	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	0.05	<0.010	0.05	100	
Chloroethane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Chloroform	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	0.05	<0.010	0.05	100	
1-Chlorohexane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Chloromethane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Chlorotoluene	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	---	<0.010	---	---	
Dibromochloromethane	ND<1 0.010	ND<1 0.010	ND<1 0.010	---	.175	<0.010	.160	91	

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

5-AFTC-SB2-SS5-10-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	---	--	--	
1,2-Dichlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	--	---	--	--	
1,3-Dichlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	--	---	--	--	
1,4-Dichlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	--	---	--	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	---	--	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	103	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.046	93	
Dichloromethane	ND< 0.010	0.030	0.030	0.0	0.050	0.030	0.070	80	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.070	<0.010	0.070	100	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.160	91	
1,1,2,2-Tetrachloroethane	ND< 0.010	0.018	0.014	0.25	0.100	0.018	0.097	79	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010		--	
Tetrachloroethylene	ND< 0.010	0.018	0.014	0.25	0.100	0.018	0.097	79	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.042	85	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.160	91	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.046	92	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	--	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	--	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	--	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Lab Sample No. 35812-9Client Field Sample No. 5-AFTC-SB2-SS14-50-ITCProject AF Plant 42 IRP-IIDate Collected 2-7-86Client No. Date Received 2-8-86Laboratory Supervisor Approval: Date Analyzed 2-12-86QC Report No. 8010-16

Sample Matrix:

☐ Water (ug/L)Dilution Factor N/A☒ Soil (ug/g)\*Moisture  %☐ Other Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

5-AFTC-SB2-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35812-10  
Field Sample No. 5-AFTC-SB2-SS10-30-ITC  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-12-86  
QC Report No. 8010-16

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

5-AFTC-SB2-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.034	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35812-11  
Field Sample No. 5-AFTC-SB2-SS5-10-ITC  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-12-86  
QC Report No. 8010-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

5-AFTC-SB2-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.030	---	6.1	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane CE	0.010	0.018	---	21.5	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene CE	0.010	0.018	---	21.5	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

CE - Compounds co-elute. Amount reported is total.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                       
Project AF Plant 42 IRP-II  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 35812-12  
Field Sample No. 5-AFTC-SB2-SS5-10-ITC\_DUP  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-12-86  
QC Report No. 8010-16

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

5-A. TC-SB2-SS5-10-ITC DUP

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	0.030	---	6.1	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane CE	0.010	0.014	---	21.5	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene CE	0.010	0.014	---	21.5	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

CE - Compounds co-elute. Amount reported is total.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35812-13  
Field Sample No. 5-AFTC-SB2-SS5-10-ITC SPIKE  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-12-86  
QC Report No. 8010-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.050	---	13.9	---	
Bromoform	0.010	0.060	---	19.5	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.040	---	13.5	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.050	---	23.9	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.050	---	11.1	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.160	---	16.7	---	

continued on next page

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

5-AFTC-SB2-SS5-10-ITC SPIKE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.048	---	9.9	---	
1,2-Dichloroethane	0.010	0.052	---	11.9	---	
1,1-Dichloroethylene	0.010	0.051	---	8.7	---	
trans-1,2-dichloroethylene	0.010	0.046	---	10.6	---	
Dichloromethane	0.010	0.070	---	6.1	---	
1,2-Dichloropropane	0.010	0.070	---	15.3	---	
1,3-Dichloropropylene	0.010	0.160	---	16.7	---	
1,1,2,2-Tetrachloroethane	0.010	0.097	---	21.5	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.097	---	21.5	---	
1,1,1-Trichloroethane	0.010	0.042	---	13.1	---	
1,1,2-Trichloroethane	0.010	0.160	---	16.7	---	
Trichloroethylene	0.010	0.046	---	16.0	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF PLANT 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35812-1  
Field Sample No. 5-AFTC-SB2-SS14-50-ITC  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-19-86  
QC Report No. 8020-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF PLANT 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35812-1  
Field Sample No. 5-AFTC-SB2-SS10-30-170  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-21-86  
QC Report No. 8020-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor 1:100

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.5	0.8	---	2.7	---	
Chlorobenzene	0.5	ND<0.5	---	8.0	---	
1,2-Dichlorobenzene	0.5	ND<0.5	---	---	---	
1,3-Dichlorobenzene	0.5	ND<0.5	---	---	---	
1,4-Dichlorobenzene	0.5	7.2	---	12.5	---	
Ethyl benzene	0.5	ND<0.5	---	---	---	
Toluene	0.5	ND<0.5	---	---	---	
Xylenes (Dimethyl benzene)	0.5	2.1	---	8.0	---	
				6.2		
				8.7		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF PLANT 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35812-7  
Field Sample No. 5-AFTC-SB2-SS5-10-170  
Date Collected 2-7-86  
Date Received 2-8-86  
Date Analyzed 2-20-86  
QC Report No. 8020-16

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor 1:100

\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.5	ND<0.5	---	---	---	
Chlorobenzene	0.5	2	---	7.9	---	
1,2-Dichlorobenzene	0.5	ND<0.5	---	---	---	
1,3-Dichlorobenzene	0.5	ND<0.5	---	---	---	
1,4-Dichlorobenzene	0.5	ND<0.5	---	---	---	
Ethyl benzene	0.5	3.2	---	7.1	---	
Toluene	0.5	0.5	---	4.9	---	
Xylenes (Dimethyl benzene)	0.5	ND<0.5	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
Arcadia, CA 91006

October 8, 1986

Attn: Dennis R. Kasper

Page 1 of 19

February 12, 1986

56394

35847/rjc

#### REVISED REPORT

Four (4) samples:

<u>Sample Name</u>	<u>Date</u>	<u>Time</u>
4-VWT5-SB3-SS3-5-ITC	2-10-86	1000
4-VWT5-SB3-SS8-20-ITC	2-10-86	1000
4-VWT5-SB4-SS3-5-ITC	2-10-86	1200
4-VWT5-SB4-SS8-20-ITC	2-10-86	1200

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition, the samples were extracted according to soluble CAM Title 22 and analyzed by AA and ICP. The results are listed in the following Metals summary sheets.

Also, the samples were analyzed for oil and grease by infrared spectroscopy technique (EPA procedure 413.2). The results are listed in Table I.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Eric W. Lindsay*

Eric W. Lindsay  
Laboratory Manager I

Date of Analysis: 2/13/86

Table I

<u>Sample</u>	<u>Oil &amp; Grease (ug/g)</u>
4-VWT5-SB3-SS3-5-ITC	3
4-VWT5-SB3-SS8-20-ITC	ND<2
4-VWT5-SB4-SS3-5-ITC	ND<2
4-VWT5-SB4-SS8-20-ITC	ND<2
4-VWT5-SB4-SS8-20-ITC Spike	20
4-VWT5-SB4-SS8-20-ITC Duplicate	ND<2
Spike Concentration	20

% Recovery: +91%

Relative % Difference: N/A

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.



ES Job No. 56394

QC Report No. 66700-4

Client

Laboratory Supervisor Approval:

Project No. Af Plant 42 IRP-II

Sample Matrix:

Client No.

// Water (ug/L)

Dilution Factor

Date Collected 2-10-86

/X/ Soil (ug/ml) CAM extract

\* Moisture

Date Received 2-12-86

// Other

%

Field Sample No.	Lab Sample No.	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
4-VMT5-SB3-SS3-5-ITC	1	0.037	3.4	ND<0.03	ND<0.06	ND<0.2	0.003	ND<0.003	ND<0.03
4-VMT5-SB4-SS3-5-ITC	2	0.032	4.4	ND<0.03	ND<0.06	ND<0.2	0.002	ND<0.003	ND<0.03
4-VMT5-SB3-SS8-20-ITC	3	0.035	4.6	ND<0.03	ND<0.06	ND<0.2	0.002	ND<0.003	ND<0.03
4-VMT5-SB4-SS8-20-ITC	4a	ND<0.03	2.3	ND<0.03	ND<0.06	ND<0.2	0.002	ND<0.003	ND<0.03
Date Analyzed	M D	2/18	2/18	2/18	2/18	2/18	2/18	2/20	2/18
Analytical Method	**	G	P	P	P	P	C	G	P

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

F = Flame AAS C = Cold Vapor AAS G = Graphite Furnace AAS  
H = Hydride Vapor AAS P = Inductively Coupled Plasma



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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35847-5  
Field Sample No. 4-VWT5-SB4-SS3-5-ITC  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-13-86  
QC Report No. 8010-16

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor                                   
\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB4-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35847-6  
Field Sample No. 4-VWT5-SB4-SS8-20-ITC  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-13-86  
QC Report No. 8010-16

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_  
\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB4-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42 IRP-II

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 35847-7

Field Sample No. 4-VWT5-SB3-SS8-20-ITC

Date Collected 2-10-86

Date Received 2-12-86

Date Analyzed 2-13-86

QC Report No. 8010-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB3-SS8-20-11C

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35847-8  
Field Sample No. 4-VWT5-SB3-SS3-5-17C  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-13-86  
QC Report No. 8010-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor                                 

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

4-VWT5-SB3-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 4-VW75-SB3-SS3-5-ITC

Duplicates 35847-1, 35847-3

Spike 35847-4

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8020-17

Date Analyzed 2-18-86

Laboratory Supervisor Approval:

Dilution Factor NA

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	<0.005	0.042	80	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	<0.005	0.055	100	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.054	101	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	<0.005	0.061	95	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	<0.005	0.052	100	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	<0.005	0.047	90	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	<0.005	0.030	60	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	--	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35847-1  
Field Sample No. 4-VWT5-SB3-SS3-5-ITC  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35847-2  
Field Sample No. 4-VWT5-SB4-SS3-5-ITC  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35847-3  
Field Sample No. 4-VWT5-SB3-SS3-5-ITC Dup.  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35847-4  
Field Sample No. 4-VWT5-SB3-SS3-5-ITC SPIKE  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.042	---	2.6	---	
Chlorobenzene	0.005	0.055	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.054	---	14.6	---	
1,3-Dichlorobenzene	0.005	0.062	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.052	---	12.8	---	
Ethyl benzene	0.005	0.047	---	7.4	---	
Toluene	0.005	0.030	---	4.9	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35847-5  
Field Sample No. 4-VWT5-SB3-SS8-20-ITC  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35847-6  
Field Sample No. 4-VWT5-SB4-SS8-20-ITC  
Date Collected 2-10-86  
Date Received 2-12-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Mark Guthrie

Page 1 of 16

February 13, 1986

56394

35863/rjc

#### REVISED REPORT

Ten (10) soil samples:

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
23-BDD8-SB1-SS3-5-ITC	2-10-86	1600
23-BDD8-SB1-SS8-20-ITC	2-10-86	1600
7-ERA2-SB4-SS5-10-ITC	2-11-86	0840
7-ERA2-SB4-SS10-30-ITC	2-11-86	0840
7-ERA2-SB4-SS14-50-ITC	2-11-86	0840
15-TEB2-SB1-SS5-10-ITC	2-11-86	1515
15-TEB2-SB2-SS5-10-ITC	2-11-86	1615
15-TEB2-SB2-SS15-10-ITC	2-11-86	1615
14-EBA2-SB1-SS5-10-ITC	2-12-86	0830
14-EBA2-SB2-SS5-10-ITC	2-12-86	0945

The samples were analyzed for total petroleum hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed in Table I.

The samples were also extracted according to soluble CAM Title 22 and analyzed by AAS and ICP. The results are listed in the following Metals and Environmental Quality Parameters summary sheets.

In addition, the samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

Also, the samples were analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

William P. Fassinger  
Chemist

Richard L. Merrell  
Laboratory Director

Table I

Sample: AF Plant 42 IRP-II, ES Job No. 56394  
Date of Analysis: 2-19-86

Total Petroleum Hydrocarbons (ug/c)

7-ERA2-SB4-SS5-10'-ITC	ND<2
7-ERA2-SB4-SS10-30'-ITC	ND<2
7-ERA2-SB4-SS14-50'-ITC	ND<2
14-EBA2-SB1-SS5-10'-ITC	ND<2
14-EBA2-SB2-SS5-10'-ITC	ND<2
15-TEB2-SB1-SS5-10'-ITC	17
15-TEB2-SB2-SS5-10'-ITC	4350
15-TEB2-SB2-SS15-10'-ITC	2800
7-ERA2-SB4-SS5-10'-ITC Dup.	ND<2
7-ERA2-SB4-SS5-10'-ITC Spike	18
Spike Concentration	18

Percent Recovery: 100%

Relative Percent Differnece: N/A

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.





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1. *U. m. m. m.* 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920. 1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940. 1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184. 2185. 2186. 2187. 2188. 2189. 2190. 2191. 2192. 2193. 2194. 2195. 2196. 2197. 2198. 2199. 2200. 2201. 2202. 2203. 2204. 2205. 2206. 2207. 2208. 2209. 2210. 2211. 2212. 2213. 2214. 2215. 2216. 2217. 2218. 2219. 2220. 2221. 2222. 2223. 2224. 2225. 2226. 2227. 2228. 2229. 2230. 2231. 2232. 2233. 2234. 2235. 2236. 2237. 2238. 2239. 2240. 2241. 2242. 2243. 2244. 2245. 2246. 2247. 2248. 2249. 2250. 2251. 2252. 2253. 2254. 2255. 2256. 2257. 2258. 2259. 2260. 2261. 2262. 2263. 2264. 2265. 2266. 2267. 2268. 2269. 2270. 2271. 2272. 2273. 2274. 2275. 2276. 2277. 2278. 2279. 2280. 2281. 2282. 2283. 2284. 2285. 2286. 2287. 2288. 2289. 2290. 2291. 2292. 2293. 2294. 2295. 2296. 2297. 2298. 2299. 2300. 2301. 2302. 2303. 2304. 2305. 2306. 2307. 2308. 2309. 2310. 2311. 2312. 2313. 2314. 2315. 2316. 2317. 2318. 2319. 2320. 2321. 2322. 2323. 2324. 2325. 2326. 2327. 2328. 2329. 2330. 2331. 2332. 2333. 2334. 2335. 2336. 2337. 2338. 2339. 2340. 2341. 2342. 2343. 2344. 2345. 2346. 2347. 2348. 2349. 2350. 2351. 2352. 2353. 2354. 2355. 2356. 2357. 2358. 2359. 2360. 2361. 2362. 2363. 2364. 2365. 2366. 2367. 2368. 2369. 2370. 2371. 2372. 2373. 2374. 2375. 2376. 2377. 2378. 2379. 2380. 2381. 2382. 2383. 2384. 2385. 2386. 2387. 2388. 2389. 2390. 2391. 2392. 2393. 2394. 2395. 2396. 2397. 2398. 2399. 2400. 2401. 2402. 2403. 2404. 2405. 2406. 2407. 2408. 2409. 2410. 2411. 2412. 2413. 2414. 2415. 2416. 2417. 2418. 2419. 2420. 2421. 2422. 2423. 2424. 2425. 2426. 2427. 2428. 2429. 2430. 2431. 2432. 2433. 2434. 2435. 2436. 2437. 2438. 2439. 2440. 2441. 2442. 2443. 2444. 2445. 2446. 2447. 2448. 2449. 2450. 2451. 2452. 2453. 2454. 2455. 2456. 2457. 2458. 2459. 2460. 2461. 2462. 2463. 2464. 2465. 2466. 2467. 2468. 2469. 2470. 2471. 2472. 2473. 2474. 2475. 2476. 2477. 2478. 2479. 2480. 2481. 2482. 2483. 2484. 2485. 2486. 2487. 2488. 2489. 2490. 2491. 2492. 2493. 2494. 2495. 2496. 2497. 2498. 2499. 2500. 2501. 2502. 2503. 2504. 2505. 2506. 2507. 2508. 2509. 2510. 2511. 2512. 2513. 2514. 2515. 2516. 2517. 2518. 2519. 2520. 2521. 2522. 2523. 2524. 2525. 2526. 2527. 2528. 2529. 2530. 2531. 2532. 2533. 2534. 2535. 2536. 2537. 2538. 2539. 2540. 2541. 2542. 2543. 2544. 2545. 2546. 2547. 2548. 2549. 2550. 2551. 2552. 2553. 2554. 2555. 2556. 2557. 2558. 2559. 2560. 2561. 2562. 2563. 2564. 2565. 2566. 2567. 2568. 2569. 2570. 2571. 2572. 2573. 2574. 2575. 2576. 2577. 2578. 2

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample No. 23-0000-SB1-SS3-5-ITC

Encloses 35860-10, 35863-11

SECRET - 35863-12

Samp's *Journal*:

Notes: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 8

Y. Saito (Ed.)

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CONCLUSIONS

QC Report No. 8010-17

Date Analyzed 2-13-66

Laboratory Supervisor Approval:

Dilution Factor	N/A
-----------------	-----

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSP	PR	
Benzyl chloride	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Benzyl-chloroethyl ether	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Bis(2-chloroisopropyl) ether	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Bromobenzene	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Bromodichloroethane	ND<0.010	ND<0.010	ND<0.010	---	0.050	<0.010	0.040	80	
Bromoforn	ND<0.010	ND<0.010	ND<0.010	---	0.050	<0.010	0.044	88	
Bromomethane	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Carbon tetrachloride	ND<0.010	ND<0.010	ND<0.010	---	0.050	<0.010	0.038	76	
Chloroacetaldehyde	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Chloral	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Chlorobenzene	ND<0.010	ND<0.010	ND<0.010	---	0.050	<0.010	0.046	91	
Chloroethane	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Chloroform	ND<0.010	ND<0.010	ND<0.010	---	0.050	<0.010	0.044	89	
1-Chlorohexane	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
2-Chloroethyl methyl ether	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Chloromethane	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Chloroethyl methyl ether	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Chlorotoluene	ND<0.010	ND<0.010	ND<0.010	---	---	<0.010	---	---	
Dibromochloroethane	ND<0.010	ND<0.010	ND<0.010	---	0.175	<0.010	0.164	93	

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD-SB1-SS3-5-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.042	84	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.044	89	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.042	84	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.044	89	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.043	85	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.070	<0.010	0.064	91	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.164	94	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.087	87	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.087	87	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.045	90	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.175	<0.010	0.164	94	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.049	99	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP - II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35863-9  
Field Sample No. 23-BDD8-SB1-SS4-20-17  
Date Collected 2-10-86  
Date Received 2-13-86  
Date Analyzed 2-13-86  
QC Report No. 8010-17

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD8-SB1-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Joo No. 56394Client Project AF Plant 42 IRP - IIClient No. Laboratory Supervisor Approval: Lab Sample No. 35863-10Field Sample No. 23-BDD8-SB1-SS3-5-ITCDate Collected 2-10-86Date Received 2-13-86Date Analyzed 2-13-86QC Report No. 8010-17

Sample Matrix:

☐ Water (ug/L)☒ Soil (ug/g)☐ Other Dilution Factor N/A\*Moisture Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD8-SB1-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP - II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35863-11 DUP.  
Field Sample No. 23-BDD8-SB1-SS3-5-ITC  
Date Collected 2-10-86  
Date Received 2-13-86  
Date Analyzed 2-13-86  
QC Report No. 8010-17

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD8-S81-SS3-5-ITC DUP.

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP - II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35863-12 SPIKE  
Field Sample No. 23-BDD8-SB1-SS3-5-ITC  
Date Collected 2-10-86  
Date Received 2-13-86  
Date Analyzed 2-13-86  
QC Report No. 8010-17

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.040	---	13.9	---	
Bromoform	0.010	0.044	---	19.5	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.039	---	13.5	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.046	---	23.9	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.044	---	11.1	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.164	---	16.7	---	

continued on next page



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD8-SB1-SS3-5-ITC SPIKE

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.042	---	9.9	---	
1,2-Dichloroethane	0.010	0.044	---	11.9	---	
1,1-Dichloroethylene	0.010	0.042	---	8.7	---	
trans-1,2-dichloroethylene	0.010	0.044	---	10.6	---	
Dichloromethane	0.010	0.043	---	6.1	---	
1,2-Dichloropropane	0.010	0.064	---	15.3	---	
1,3-Dichloropropylene	0.010	0.164	---	16.7	---	
1,1,2,2-Tetrachloroethane	0.010	0.087	---	21.5	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.087	---	21.5	---	
1,1,1-Trichloroethane	0.010	0.045	---	13.1	---	
1,1,2-Trichloroethane	0.010	0.164	---	16.7	---	
Trichloroethylene	0.010	0.049	---	16.0	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35863-4  
Field Sample No. 23-BDD8-SB1-SS3-5-ITC  
Date Collected 2-10-86  
Date Received 2-13-86  
Date Analyzed 2-18-86  
QC Report No. 8020-17

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
xylene (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35863-5  
Field Sample No. 23-BDD8-SB1-SS8-20-ITC  
Date Collected 2-10-86  
Date Received 2-13-86  
Date Analyzed 2-19-86  
QC Report No. 8020-17

Sample Matrix:

☐ water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

October 8, 1986

Attn: Mark A. Guthrie

Page 1 of 17

February 5, 1986

56435

35876 rjg

Four (4) soil samples:

<u>Samples labeled</u>	<u>Date</u>	<u>Time</u>
20-NLA2-SB1-SS3-5-ITC	2-12-86	11:00
20-NLA2-SB1-SS8-20-ITC	2-12-86	11:00
11-DAA2-SB1-SS5-10-ITC	2-12-86	15:30
11-DAA2-SB2-SS5-10-ITC	2-12-86	16:00

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

The samples were analyzed for total petroleum hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed in Table I.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

Engineering Science  
M.A. Guttmann

May 19, 1966  
JN: 35876 - Page 2

Table I

Sample: AF Plant 42, IPP-II ES Job No. 56394  
Date of analysis: 3-4-66

Oil and Grease

11-DA42-SB1-SS5-10-ITC	ND<2
11-DA42-SB2-SC5-10-ITC	ND<2
20-NLA2-SB1-SS3-5-ITC	4
20-NLA2-SB1-SS8-20-ITC	ND<2
20-NLA2-SB1-SS8-20-ITC Dup.	ND<2
20-NLA2-SB1-SS8-20-ITC Spike	17
Spike Concentration	17

Percent Recovery: 100%

Relative Percent Difference: N/A

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35878-6  
Field Sample No. 20-NLA2-SB1-SS3-5-ITC  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-14-86  
QC Report No. 8010-17

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

20-NLA2-SB1-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Lab Sample No. 35878-3

Client

Field Sample No. 20-NLA2-SB1-SS8-20-ITC

Project AF Plant 42 IRP-II

Date Collected 2-12-86

Client No.

Date Received 2-14-86

Laboratory Supervisor Approval:

Date Analyzed 2-14-86

QC Report No. 8010-17

Sample Matrix:

☐ / Water (ug/L)

Dilution Factor N/A

☒ / Soil (ug/g)

\*Moisture  %

☐ / Other

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

20-NLA2-SB1-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Lab Sample No. 35878-5Client -Field Sample No. 11-DAA2-SB1-SS5-10-ITCProject AF Plant 42 IRP-IIDate Collected 2-12-86Client No. -Date Received 2-14-86Laboratory Supervisor Approval: -Date Analyzed 2-14-86QC Report No. 8010-17

Sample Matrix:

☐ / Water (ug/L)Dilution Factor N/A☒ / Soil (ug/g)\*Moisture -☐ / Other -Spike Source -

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

11-DAA2-SB1-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 35878-4  
Field Sample No. 11-DAA2-SB2-SS5-10-ITC  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-14-86  
QC Report No. 8010-17

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

11-DAA2-SB2-SS5-10-17C

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 20-NLA2-SB1-SS8-20-ITC

Duplicates 35878-8, 35878-9

Spike 85878-10

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8020-18

Date Analyzed 2-24-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	ND< 0.005	0.051	98	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	ND< 0.005	0.057	114	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	ND< 0.005	0.054	104	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.066	120	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.052	ND< 0.005	0.054	104	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.064	ND< 0.005	0.055	86	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	ND< 0.005	0.054	102	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	--	ND< 0.005	---	--	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
Sw Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35878-5  
Field Sample No. 20-NLA2-SB1-SS3-5-ITC  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-24-86  
QC Report No. 8020-18

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35878-8  
Field Sample No. 20-NLA2-SB1-SS8-20-ITC  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-24-86  
QC Report No. 8020-18

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35878-9 DUP.  
Field Sample No. 20-NLA2-SB1-SS8-20-ITC  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-24-86  
QC Report No. 8020-18

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected, the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 35878-10 SPIKE  
Field Sample No. 20-NLA2-SB1-SS8-20-110  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-24-86  
QC Report No. 8020-18

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.051	---	2.6	---	
Chlorobenzene	0.005	0.057	---	8.0	---	
1,2-Dichlorobenzene	0.005	0.054	---	14.6	---	
1,3-Dichlorobenzene	0.005	0.066	---	13.0	---	
1,4-Dichlorobenzene	0.005	0.054	---	12.8	---	
Ethyl benzene	0.005	0.055	---	7.4	---	
Toluene	0.005	0.054	---	4.9	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35878-7  
Field Sample No. 11-DAA2-SR1-SS5-10-ITC  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-24-86  
QC Report No. 8020-18

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 35876-6  
Field Sample No. 11-DAA2-SB2-SS5-10-11  
Date Collected 2-12-86  
Date Received 2-14-86  
Date Analyzed 2-24-86  
QC Report No. 8020-18

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N 4

\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
125 W. Huntington Dr.  
P.O.Box 538  
Arcadia, CA 91006

May 31, 1986

Attn: Mark Guthrie

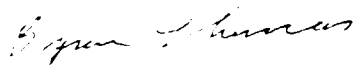
March 20, 1986


56394

36257/rjc

Two (2) soil samples labeled: "23-BDD8-SB1-SS3-5-ITC" and  
"23-BDD8-SB1-SS8-20-ITC".

The samples were extracted according to soluble CAM Title 22 and analyzed by Inductively Coupled Plasma. The results are listed in the following metals summary sheets.

  
Byron Thomas  
Group Leader

  
Steve Jones, Ph.D.  
Technical Director





Spike source(s) Commercial standards

INTERNATIONAL TECHNOLOGY CONFERENCE

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

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**CERTIFICATE OF ANALYSIS**

Engineering Science  
57 Executive Park So.  
Suite 590  
Atlanta, GA 30329-2213

October 8, 1986

Attn: M.A. Guthrie

Page 1 of 32

April 10, 1986

56394

36506/rjc

REVISED REPORT

Six (6) soil samples:

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
23-BDD8-SB2-SS3-5-ITC	4-8-86	15:30
23-BDD8-SB2-SS8-20-ITC	4-8-86	15:30
1-FCD2-SB1-SS5-10-ITC	4-9-86	09:30
1-FCD2-SB1-SS10-30-ITC	4-9-86	09:30
1-FCD2-SB1-SS14-50-ITC	4-9-86	09:30
1-FCD2-SB1-SS15-30-ITC	4-9-86	09:30

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

In addition, the samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

The four samples with prefix "1-FCD2-SB1" were extracted by EPA Method 3550 and analyzed for Total Petroleum Hydrocarbons according to EPA Method 418.1. The results are listed in Table I, and the Quality Control data is listed in Table II.

The two samples with prefix "23-BDD8-SB2" were extracted by EPA Method 3550 and analyzed for Total Oil and Grease by EPA Method 413.2. The results are listed in Table III, and the Quality Control data is listed in Table IV.

The two samples were also extracted according to Title 22 66700 and analyzed by AAS and ICP.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Eric W. Lindsay*

Eric W. Lindsay  
Laboratory Manager I

Table I

<u>Total Petroleum Hydrocarbons*</u>	
<u>Sample Identification</u>	<u>Micrograms/gram</u>
1-FCD2-SB1-SS5-10-ITC	ND<2
1-FCD2-SB1-SS10-30-ITC	ND<2
1-FCD2-SB1-SS14-50-ITC	ND<2
1-FCD2-SB1-SS15-30-ITC	ND<2
Method blank	ND<2

\* - Date Analyzed - April 12, 1986.

Table II

Quality Control Data

<u>Total Petroleum Hydrocarbons*</u>	
<u>Sample Identification</u>	<u>Micrograms/gram</u>
1-FCD2-SB1-SS15-30-ITC	ND<2
1-FCD2-SB1-SS15-30-ITC Dup.	ND<2
Relative Percent Difference - NA	
1-FCD2-SB1-SS15-30-ITC - Spike	22.0
Spike Standard	25.9
Percent Recovery - 85%	

\* - Date Analyzed - April 12, 1986

Table III

<u>Total Oil and Grease*</u>	
<u>Sample Identification</u>	<u>Micrograms/gram</u>
23-BDD8-SB2-SS3-5-ITC	ND<2
23-BDD8-SB2-SS8-20-ITC	ND<2

\* - Date Analyzed - April 12, 1986

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Table IV

Quality Control Data

Date Analyzed: April 12, 1986

<u>Sampled Identification</u>	<u>Total Oil and Grease</u> <u>Micrograms/gram</u>
23-BDD8-SB2-SS3-5-ITC	ND<2
23-BDD8-SB2-SS3-5-ITC - Dup.	ND<2
Relative Percent Difference - NA	
23-BDD8-SB2-SS3-5-ITC - Spike	27.6
Spike Standard	25.6
Percent Recovery - 108%	

NA - Not Applicable

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.



## Sample Matrix:

/ / Water (ug/L)

/X/ Soil (mg/l)

/ / Other

Dilution Factor

\*Moisture

QC Report No. 66700-8

Laboratory Supervisor Approval:

Spike Source(s)

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal.	** Anal. Method	Blank	Duplicates			Spiked Recovery			Notes
						C1	C2	RPD	SA	SR	SSR	PR
Arsenic	36506-2D	NA	4-15	G		ND< 0.03	ND< 0.03	---	NA	NA	NA	NA
Barium	36506-2D	NA	4-15	P		2.6 ND<	4.6 ND<	56	NA	NA	NA	NA
Cadmium	36506-2D	NA	4-15	P		0.03 ND<	0.03 ND<	---	NA	NA	NA	NA
Chromium	36506-2D	NA	4-15	P		0.06 ND<	0.06 ND<	---	NA	NA	NA	NA
Lead	36506-2D	NA	4-15	P		0.19 ND<	0.21 ND<	---	NA	NA	NA	NA
Mercury	36506-2D	NA	4-23	C		0.012 ND<	0.009 ND<	29	NA	NA	NA	NA
Selenium	36506-2D	NA	4-15	G		0.005 ND<	0.005 ND<	---	NA	NA	NA	NA
Silver	36506-2D	NA	4-15	P		0.03 ND<	0.19 ND<	---	NA	NA	NA	NA
Iron	36506-2D	NA	4-15	P		10 ND<	10 ND<	0	NA	NA	NA	NA
Copper	36506-2D	NA	4-15	P		0.07 ND<	0.07 ND<	---	NA	NA	NA	NA
Manganese	36506-2D	NA	4-15	P		8.1 ND<	8.1 ND<	0	NA	NA	NA	NA
Zinc	36506-2D	NA	4-15	P		0.19 ND<	0.19 ND<	0	NA	NA	NA	NA

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

Engineering Science  
Page 6

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS10-30-ITC

Lab Sample Nos.

Duplicates 36506-9, 36506-10

Spike 36506-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8010-21

Date Analyzed 4-14-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Bis(2-Chloroethoxy)methane	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Bis(2-Chloroisopropyl)ether	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Bromobenzene	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Bromodichloromethane	ND< 0.010	ND< 0.010	ND< 0.010		0.050	ND< 0.010	0.050	100	
Bromoform	ND< 0.010	ND< 0.010	ND< 0.010		0.050	ND< 0.010	0.047	94	
Bromomethane	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Carbon tetrachloride	ND< 0.010	ND< 0.010	ND< 0.010		0.050	ND< 0.010	0.040	80	
Chloroacetaldehyde	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Chloral	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Chlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010		0.050	ND< 0.010	0.040	80	
Chloroethane	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Chloroform	ND< 0.010	ND< 0.010	ND< 0.010		0.050	ND< 0.010	0.048	96	
1-Chlorohexane	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
2-Chloroethyl vinyl ether	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Chloromethane	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Chloromethyl methyl ether	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Chlorotoluene	ND< 0.010	ND< 0.010	ND< 0.010		--	ND< 0.010	---		
Dibromochloromethane	ND< 0.010	ND< 0.010	ND< 0.010		0.155	ND< 0.010	0.146	94	

continued on next page



QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS10-30-170

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.050	100	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.054	106	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.025	50	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.045	<0.010	0.045	100	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.041	82	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.026	52	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.146	94	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.095	95	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.095	95	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.045	90	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.146	94	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.042	84	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	--	<0.010	---	--	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 36506-4

Field Sample No. 1-FCD2-SB1-SS14-50-ITC

Date Collected 4-9-86

Date Received 4-10-86

Date Analyzed 4-14-86

QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Dilution Factor N/A

\*Moisture N/A %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010		---		
Bis(2-Chloroethoxy)methane	0.010	ND<0.010		---		
Bis(2-chloroisopropyl)ether	0.010	ND<0.010		---		
Bromobenzene	0.010	ND<0.010		---		
Bromodichloromethane	0.010	ND<0.010		---		
Bromoform	0.010	ND<0.010		---		
Bromomethane	0.010	ND<0.010		---		
Carbon tetrachloride	0.010	ND<0.010		---		
Chloroacetaldehyde	0.010	ND<0.010		---		
Chloral	0.010	ND<0.010		---		
Chlorobenzene	0.010	ND<0.010		---		
Chloroethane	0.010	ND<0.010		---		
Chloroform	0.010	ND<0.010		---		
1-Chlorohexane	0.010	ND<0.010		---		
2-Chloroethyl vinyl ether	0.010	ND<0.010		---		
Chloromethane	0.010	ND<0.010		---		
Chloromethyl methyl ether	0.010	ND<0.010		---		
Chlorotoluene	0.010	ND<0.010		---		
Dibromochloromethane	0.010	ND<0.010		---		

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS14-50-77

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	----	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	----	---	
1,1-Dichloroethane	0.010	ND<0.010	---	----	---	
1,2-Dichloroethane	0.010	ND<0.010	---	----	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	----	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	----	---	
Dichloromethane	0.010	ND<0.010	---	----	---	
1,2-Dichloropropane	0.010	ND<0.010	---	----	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	----	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	----	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	----	---	
Tetrachloroethylene	0.010	ND<0.010	---	----	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	----	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	----	---	
Trichloroethylene	0.010	ND<0.010	---	----	---	
Trichlorofluoromethane	0.010	ND<0.010	---	----	---	
Trichloropropane	0.010	ND<0.010	---	----	---	
Vinyl chloride	0.010	ND<0.010	---	----	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
halogenated Volatile Organics  
SW Method 8010

ES Job No. 56934  
Client \_\_\_\_\_  
Project A7 Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

Lab Sample No. 36506-5  
Field Sample No. 1-PCD2-SB1-SS5-10-ITC  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

Water (ug/L)

Y. S. 1944

Other

Dilution Factor

\*Moisture N/A

### Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010		---		
Bis(2-Chloroethoxy)methane	0.010	ND<0.010		---		
Bis(2-chloroisopropyl)ether	0.010	ND<0.010		---		
Bromobenzene	0.010	ND<0.010		---		
Bromodichloromethane	0.010	ND<0.010		---		
Bromoform	0.010	ND<0.010		---		
Bromomethane	0.010	ND<0.010		---		
Carbon tetrachloride	0.010	ND<0.010		---		
Chloroacetaldehyde	0.010	ND<0.010		---		
Chloral	0.010	ND<0.010		---		
Chlorobenzene	0.010	ND<0.010		---		
Chloroethane	0.010	ND<0.010		---		
Chloroform	0.010	ND<0.010		---		
1-Chlorohexane	0.010	ND<0.010		---		
2-Chloroethyl vinyl ether	0.010	ND<0.010		---		
Chloromethane	0.010	ND<0.010		---		
Chloromethyl methyl ether	0.010	ND<0.010		---		
Chlorotoluene	0.010	ND<0.010		---		
Dibromochloromethane	0.010	ND		---		

Controlled

AD-A198 943

INSTALLATION RESTORATION PROGRAM PHASE 2

5/7

CONFIRMATION/QUANTIFICATION STAG. (U)

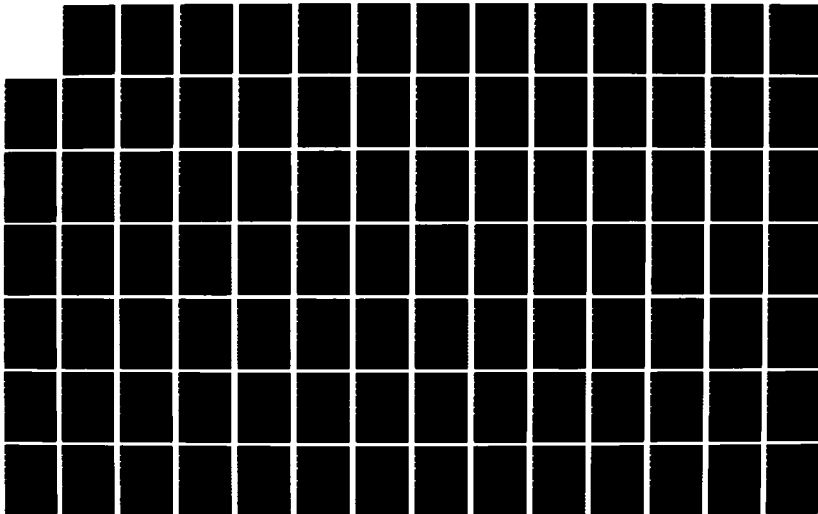
ENGINEERING-SCIENCE INC PASADENA CALIF 20 FEB 87

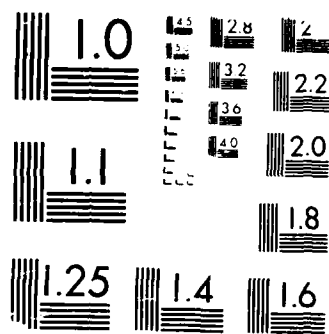
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F/G 24/7

NL





ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-6  
Field Sample No. 23-BDD8-SB2-SS8-20-ITC  
Date Collected 4-08-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010		---		
Bis(2-Chloroethoxy)methane	0.010	ND<0.010		---		
Bis(2-chloroisopropyl)ether	0.010	ND<0.010		---		
Bromobenzene	0.010	ND<0.010		---		
Bromodichloromethane	0.010	ND<0.010		---		
Bromoform	0.010	ND<0.010		---		
Bromomethane	0.010	ND<0.010		---		
Carbon tetrachloride	0.010	ND<0.010		---		
Chloroacetaldehyde	0.010	ND<0.010		---		
Chloral	0.010	ND<0.010		---		
Chlorobenzene	0.010	ND<0.010		---		
Chloroethane	0.010	ND<0.010		---		
Chloroform	0.010	ND<0.010		---		
1-Chlorohexane	0.010	ND<0.010		---		
2-Chloroethyl vinyl ether	0.010	ND<0.010		---		
Chloromethane	0.010	ND<0.010		---		
Chloromethyl methyl ether	0.010	ND<0.010		---		
Chlorotoluene	0.010	ND<0.010		---		
Dibromochloromethane	0.010	ND<0.010		---		

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD8-SB2-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-7  
Field Sample No. 1-FCD2-SB1-SS15-30-ITC  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010		---		
Bis(2-Chloroethoxy)methane	0.010	ND<0.010		---		
Bis(2-chloroisopropyl)ether	0.010	ND<0.010		---		
Bromobenzene	0.010	ND<0.010		---		
Bromodichloromethane	0.010	ND<0.010		---		
Bromoform	0.010	ND<0.010		---		
Bromomethane	0.010	ND<0.010		---		
Carbon tetrachloride	0.010	ND<0.010		---		
Chloroacetaldehyde	0.010	ND<0.010		---		
Chloral	0.010	ND<0.010		---		
Chlorobenzene	0.010	ND<0.010		---		
Chloroethane	0.010	ND<0.010		---		
Chloroform	0.010	ND<0.010		---		
1-Chlorohexane	0.010	ND<0.010		---		
2-Chloroethyl vinyl ether	0.010	ND<0.010		---		
Chloromethane	0.010	ND<0.010		---		
Chloromethyl methyl ether	0.010	ND<0.010		---		
Chlorotoluene	0.010	ND<0.010		---		
Dibromochloromethane	0.010	ND<0.010		---		

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS15-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-8  
Field Sample No. 23-BDD8-SB2-SS3-5-ITC  
Date Collected 4-08-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_  
\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

23-BDD8-SB2-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-9  
Field Sample No. 1-FCD2-SB1-SS10-30-ITC  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010		---		
Bis(2-Chloroethoxy)methane	0.010	ND<0.010		---		
Bis(2-chloroisopropyl)ether	0.010	ND<0.010		---		
Bromobenzene	0.010	ND<0.010		---		
Bromodichloromethane	0.010	ND<0.010		---		
Bromoform	0.010	ND<0.010		---		
Bromomethane	0.010	ND<0.010		---		
Carbon tetrachloride	0.010	ND<0.010		---		
Chloroacetaldehyde	0.010	ND<0.010		---		
Chloral	0.010	ND<0.010		---		
Chlorobenzene	0.010	ND<0.010		---		
Chloroethane	0.010	ND<0.010		---		
Chloroform	0.010	ND<0.010		---		
1-Chlorohexane	0.010	ND<0.010		---		
2-Chloroethyl vinyl ether	0.010	ND<0.010		---		
Chloromethane	0.010	ND<0.010		---		
Chloromethyl methyl ether	0.010	ND<0.010		---		
Chlorotoluene	0.010	ND<0.010		---		
Dibromochloromethane	0.010	ND<0.010		---		

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 36506-10

Field Sample No. 1-FCD2-SB1-SS10-30-ITC Dup

Date Collected 4-09-86

Date Received 4-10-86

Date Analyzed 4-14-86

QC Report No. 8010-21

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor

\*Moisture N/A %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010		---		
Bis(2-Chloroethoxy)methane	0.010	ND<0.010		---		
Bis(2-chloroisopropyl)ether	0.010	ND<0.010		---		
Bromobenzene	0.010	ND<0.010		---		
Bromodichloromethane	0.010	ND<0.010		---		
Bromoform	0.010	ND<0.010		---		
Bromomethane	0.010	ND<0.010		---		
Carbon tetrachloride	0.010	ND<0.010		---		
Chloroacetaldehyde	0.010	ND<0.010		---		
Chloral	0.010	ND<0.010		---		
Chlorobenzene	0.010	ND<0.010		---		
Chloroethane	0.010	ND<0.010		---		
Chloroform	0.010	ND<0.010		---		
1-Chlorohexane	0.010	ND<0.010		---		
2-Chloroethyl vinyl ether	0.010	ND<0.010		---		
Chloromethane	0.010	ND<0.010		---		
Chloromethyl methyl ether	0.010	ND<0.010		---		
Chlorotoluene	0.010	ND<0.010		---		
Dibromochloromethane	0.010	ND<0.010		---		

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS10-30-ITC Duc

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-11  
Field Sample No. 1-FCD2-SB1-SS10-30-ITC Spike  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor \_\_\_\_\_

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.005	---		---		
Bis(2-Chloroethoxy)methane	0.005	---		---		
Bis(2-chloroisopropyl)ether	0.005	---		---		
Bromobenzene	0.005	---		---		
Bromodichloromethane	0.005	.050		14.8		
Bromoform	0.005	.047		20.1		
Bromomethane	0.005	---		---		
Carbon tetrachloride	0.005	.040		14.40		
Chloroacetaldehyde	0.005	---		---		
Chloral	0.005	---		---		
Chlorobenzene	0.005	.040		24.9		
Chloroethane	0.005	---		---		
Chloroform	0.005	.048		12.0		
1-Chlorohexane	0.005	---		---		
2-Chloroethyl vinyl ether	0.005	---		---		
Chloromethane	0.005	---		---		
Chloromethyl methyl ether	0.005	---		---		
Chlorotoluene	0.005	---		---		
Dibromochloromethane	0.005	.146		17.5		

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB1-SS10-30-ITC Sp:K

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.005	---	---	---	---	
Dichlorodifluoromethane	0.005	---	---	---	---	
1,1-Dichloroethane	0.005	.050	---	10.9	---	
1,2-Dichloroethane	0.005	.054	---	12.8	---	
1,1-Dichloroethylene	0.005	.025	---	9.2	---	
trans-1,2-dichloroethylene	0.005	.045	---	11.6	---	
Chloroform	0.005	.041	---	7.3	---	
1,1,2-Trichloroethane	0.005	.026	---	16.1	---	
1,1,2,2-Tetrachloroethane	0.005	.146	---	16.3	---	
1,1,1,2-Tetrachloroethane	0.005	.095	---	22.3	---	
1,1,1,1-Tetrachloroethane	0.005	---	---	---	---	
Tetrachloroethylene	0.005	.095	---	22.3	---	
1,1,1-Trichloroethane	0.005	.045	---	13.9	---	
1,1,2-Trichloroethane	0.005	.146	---	16.3	---	
Trichloroethylene	0.005	.042	---	16.8	---	
Trichlorofluoromethane	0.005	---	---	---	---	
Trichloropropane	0.005	---	---	---	---	
Trichloroethane	0.005	---	---	---	---	

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

1-FCD2-SB1-SS10-30-ITC

Lab Sample Nos.

Duplicates 36506-11,-12

Spike 36506-13

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8020-19

Date Analyzed 4-14-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	ND< 0.005	0.050	100	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.048	87	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.056	102	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.054	98	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.054	98	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.055	ND< 0.005	0.035	65	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.060	ND< 0.005	0.057	95	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	---	ND< 0.005	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-6  
Field Sample No. 1-FCD2-SB1-SS14-50-ITC  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-7  
Field Sample No. 1-FCD2-SB1-SS5-10-ITC  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
Sw Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-8  
Field Sample No. 23-BDD8-SB2-SS8-20-17  
Date Collected 4-08-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ / water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-9  
Field Sample No. 1-FC02-SB1-SS15-30-ITC  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36506-10  
Field Sample No. 23-BDD8-SB2-SS3-5-ITC  
Date Collected 4-08-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-11  
Field Sample No. 1-FCD2-SB1-SS10-30-170  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N.A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36506-12  
Field Sample No. 1-FCD2-SB1-SS10-30-ITC Dup  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Joo No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36506-12  
Field Sample No. 1-FCD2-SB1-SS10-30-ITC Spike  
Date Collected 4-09-86  
Date Received 4-10-86  
Date Analyzed 4-14-86  
QC Report No. 8020-19

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.050	---	2.6	---	
Chlorobenzene	0.005	0.048	---	7.9	---	
1,2-Dichlorobenzene	0.005	0.056	---	14.4	---	
1,3-Dichlorobenzene	0.005	0.054	---	12.9	---	
1,4-Dichlorobenzene	0.005	0.054	---	12.7	---	
Ethyl benzene	0.005	0.036	---	7.4	---	
Toluene	0.005	0.057	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park So., Ste. 590  
Atlanta, GA 30329-2213

October 8, 1986

Attn: M.A. Guthrie

Page 1 of 20

April 11, 1986

56394

36515 hgt

#### REVISED REPORT

Five (5) soil samples

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
1-FCD2-SB1-SS19-75-ITC	4-09-86	0930
1-FCD2-SB2-SS19-75-ITC	4-10-86	0830
1-FCD2-SB2-SS5-10-ITC	4-10-86	0830
1-FCD2-SB2-SS10-30-ITC	4-10-86	0830
1-FCD2-SB2-SS14-50-ITC	4-10-86	0830

The samples were analyzed for Purgeable Halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic Volatile Organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

In addition the samples were analyzed for Total Petroleum Hydrocarbons (TPH) by infrared spectroscopy technique (EPA Method 418.1, Extraction Method 3550). The results are listed in Table I.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director

Table I

Sample: AF Plant 42 IRP-II, ES Job No. 56394  
Date of Analysis: 4-15-86

Total Petroleum Hydrocarbons (ug/g)

1-FCD2-SB1-SS19-75-ITC	ND<2
1-FCD2-SB2-SS19-75-ITC	ND<2
1-FCD2-SB2-SS5-10-ITC	6800
1-FCD2-SB2-SS10-30-ITC	1120
1-FCD2-SB2-SS14-50-ITC	ND<2
1-FCD2-SB2-SS19-75-ITC Dup.	ND<2
1-FCD2-SB1-SS19-75-ITC Spike	28
Spike Concentration	31

Percent Recovery: 90%

Relative Percent Difference: N/A

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36515-13  
Field Sample No. 1-FCD2-SB1-SS19-75-ITC  
Date Collected 4-9-86  
Date Received 4-11-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor NA  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



1-FCDO-SB1-SS19-75-170

12- This compound was not detected; the limit of detection for this analysis is 100 times the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                       
Project AF Plant 42 IRP-II  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 36515-12  
Field Sample No. 1-FCD2-SB2-SS19-75-ITC  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                     

Dilution Factor NA

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB2-SS19-75-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36515-14  
Field Sample No. 1-FCD2-SB2-SS5-10-ITC  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-14-86  
QC Report No. 8010-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor NA

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB2-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394Lab Sample No. 36515-4Client Field Sample No. 1-FCD2-SB2-SS10-30-ITCProject AF Plant 42 IRP-IIDate Collected 4-10-86Client No. Date Received 4-11-86Laboratory Supervisor Approval: Date Analyzed 4-15-86QC Report No. 8010-21

Sample Matrix:

☐ Water (ug/L)Dilution Factor NA☒ Soil (ug/g)\*Moisture  %☐ Other Spike Source 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxymethane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

1-FCD2-SB2-SS10-30-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36515-5  
Field Sample No. 1-FCD2-SB2-SS14-50-ITC  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-15-86  
QC Report No. 8010-21

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor NA

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB2-SS14-1-1

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 1-PCD2-SB2-SS14-50-ITC

QC Report No. 8020-20

Duplicates 36515-6, 36515-7

Date Analyzed 4-16-86

Spike 36515-8

Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)

Dilution Factor NA

☒ Soil (ug/kg)

\*Moisture %

☐ Other

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	<0.005	ND<	ND<	---	0.050	ND<	0.038	76	
Chlorobenzene	<0.005	ND<	ND<	---	0.053	ND<	0.036	68	
1,2-Dichlorobenzene	<0.005	ND<	ND<	---	0.054	ND<	0.037	69	
1,3-Dichlorobenzene	<0.005	ND<	ND<	---	0.056	ND<	0.038	68	
1,4-Dichlorobenzene	<0.005	ND<	ND<	---	0.053	ND<	0.037	70	
Ethyl benzene	<0.005	ND<	ND<	---	0.054	ND<	0.037	69	
Toluene	<0.005	ND<	ND<	---	0.059	ND<	0.039	66	
Xylenes (Dimethyl benzene)	<0.005	ND<	ND<	---	---	ND<	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
Std. Method 8020

ES Doc No. 56394

Client:

Project AF Plant 42 IRP-11

Client No. \_\_\_\_\_

Laboratory Supervisor Approval:

Lab Sample No. 36515-5

Field Sample No. 1-FCD2-SB1-SS19-75-ITC

Date Collected 4-9-86

Date Received 4-10-86

Date Analyzed 4-16-86

QC Report No. 8020-20

State Matrix:

Water (ug L)

4X Se-75 (ug/g)

Other

Dilution Factor                      N/A

*Moisture	%
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
0	0

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36515-4  
Field Sample No. 1-FCD2-SB2-SS19-75-ITC  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-16-86  
QC Report No. 8020-20

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. c36515-10, 36515-12  
Field Sample No. 1-FCD2-SB2-SS5-10-ITC  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-16-86  
QC Report No. 8020-20

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor cConc; 1:500

\*Moisture \_\_\_\_\_ %

Source Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	0.047	---	7.3	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

c - Several sample concentrations were analyzed due to matrix effects

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36515-9  
Field Sample No. 1-FCD2-SB2-SS10-30-ITC  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-16-86  
QC Report No. 8020-20

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor 8020-20  
\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Doc No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lap Sample No. 36515-6  
Field Sample No. 1-FCD2-SB2-SS14-50-170  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-16-86  
QC Report No. 8020-20

Sample Matrix:

☐ water (ug/L)  
☐ soil (ug/g)  
☐ other \_\_\_\_\_

Dilution Factor 8020-20  
\*Moisture N/A %

Spill Source: \_\_\_\_\_

Concentration	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
1,1,2,2-Tetrachloroethane	0.005	ND<0.005	---	---	---	

ND = This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36515-7 Dup.  
Field Sample No. 1-FCD2-SB2-SS14-50-110  
Date Collected 4-10-86  
Date Received 4-11-86  
Date Analyzed 4-16-86  
QC Report No. 8020-20

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other

Dilution Factor 8020-20  
\*Moisture N/A %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.





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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park S., Suite 590  
Atlanta, GA 30329-2213

October 8, 1986

Attn: M.A. Guthrie

Page 1 of 35

April 15, 1986

56394

36546/rjc

#### REVISED REPORT

Eight (8) soil samples.

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
1-FCD2-SB3-SS5-10-ITC	4-11-86	1045
1-FCD2-SB3-SS10-30-ITC	4-11-86	1045
1-FCD2-SB3-SS14-50-ITC	4-11-86	1045
1-FCD2-SB4-SS2-2.5-ITC	4-12-86	0900
1-FCD2-SB4-SS5-10-ITC	4-12-86	0900
1-FCD2-SB4-SS10-30-ITC	4-12-86	0900
1-FCD2-SB5-SS2-2.5-ITC	4-12-86	1030
1-FCD2-SB5-SS5-10-ITC	4-12-86	1030

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

The samples were analyzed for Total Petroleum Hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed in Table 1.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

Table I

SAMPLE: ES Job No. 56394, AF Plant 42, IRP-II  
DATE OF ANALYSIS: 4-25-86

<u>Sample Identification</u>	<u>Total Petroleum Hydrocarbons (ug/g)</u>
1-FCD2-SB5-SS5-10-ITC	ND<2
1-FCD2-SB5-SS2-2.5-ITC	190
1-FCD2-SB4-SS5-10-ITC	3
1-FCD2-SB4-SS10-30-ITC	ND<2
1-FCD2-SB4-SS2-2.5-ITC	450
1-FCD2-SB3-SS10-30-ITC	ND<2
1-FCD2-SB3-SS5-10-ITC	7100
1-FCD2-SB3-SS14-50-ITC	3
1-FCD2-SB3-SS14-50-ITC Duplicate	ND<2
1-FCD2-SB3-SS14-50-ITC Spike	21
Spike Concentration	22

Relative Percent Difference - N/A

Percent Recovery - 95.5%

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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QUALITY CONTROL RESULTS SUMMARY  
halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 1-PCD2-SB3-SS10-30-ITC

Duplicates 36546-9, 36546-10

Spike 36546-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8010-24

Date Analyzed 4-21-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroisopropyl)ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromodichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.053	106	
Bromoform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.041	82	
Bromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Carbon tetrachloride	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.055	110	
Chloroacetaldehyde	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloral	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.051	102	
Chloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloroform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
1-Chlorohexane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorotoluene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Dibromochloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.158	102	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB3-SS10-30-170

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.051	102	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.026	52	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.036	72	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.055	110	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.158	102	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.098	98	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.098	98	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.080	160	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.158	102	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.050	100	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 ISP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36546-9  
Field Sample No. 1-FCD2-SB3-SS5-10-ITC  
Date Collected 4-11-86  
Date Received 4-15-86  
Date Analyzed 4-23-86  
QC Report No. 8010-24

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FC02-SB3-SS3-10-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42 IRP-II

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 36546-9

Field Sample No. 1-FCD2-SB3-SS10-30-170

Date Collected 4-11-86

Date Received 4-15-86

Date Analyzed 4-21-86

QC Report No. 8010-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromochloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-PCD2-SB3-SS10-30-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloropropane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-10 Duplicate  
Field Sample No. 1-FCD2-SB3-SS10-30-ITC  
Date Collected 4-11-86  
Date Received 4-15-86  
Date Analyzed 4-21-86  
QC Report No. 8010-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Duplicate  
1-FCD2-SB3-SS10-30-173

Compound	Concentration			Retention Time		Notes
	Det. Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropane	0.010	ND<0.010	---	---	---	
1,1,3,3-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1,1-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	

Note: If this compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-11 Spike  
Field Sample No. 1-FCD2-SB3-SS10-30-ITC  
Date Collected 4-11-86  
Date Received 4-15-86  
Date Analyzed 4-21-86  
QC Report No. 8010-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	---	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	---	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	---	---	---	---	
Bromobenzene	0.010	---	---	---	---	
Bromodichloromethane	0.010	0.053	---	14.6	---	
Bromoform	0.010	0.041	---	19.9	---	
Bromomethane	0.010	---	---	---	---	
Carbon tetrachloride	0.010	0.055	---	14.2	---	
Chloroacetaldehyde	0.010	---	---	---	---	
Chloral	0.010	---	---	---	---	
Chlorobenzene	0.010	0.051	---	24.7	---	
Chloroethane	0.010	---	---	---	---	
Chloroform	0.010	0.052	---	11.8	---	
1-Chlorohexane	0.010	---	---	---	---	
2-Chloroethyl vinyl ether	0.010	---	---	---	---	
Chloromethane	0.010	---	---	---	---	
Chloromethyl methyl ether	0.010	---	---	---	---	
Chlorotoluene	0.010	---	---	---	---	
Dibromochloromethane	0.010	0.158	---	17.3	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Spike  
1-FCD2-SB3-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	---	---	---	---	
Dichlorodifluoromethane	0.010	---	---	---	---	
1,1-Dichloroethane	0.010	0.052	---	10.7	---	
1,2-Dichloroethane	0.010	0.051	---	12.6	---	
1,1-Dichloroethylene	0.010	0.026	---	9.7	---	
trans-1,2-dichloroethylene	0.010	0.052	---	11.5	---	
Dichloromethane	0.010	0.036	---	7.1	---	
1,2-Dichloropropane	0.010	0.055	---	16.0	---	
1,3-Dichloropropylene	0.010	0.158	---	16.2	---	
1,1,2,2-Tetrachloroethane	0.010	0.098	---	22.2	---	
1,1,1,2-Tetrachloroethane	0.010	---	---	---	---	
Tetrachloroethylene	0.010	0.098	---	22.2	---	
1,1,1-Trichloroethane	0.010	0.080	---	13.8	---	
1,1,2-Trichloroethane	0.010	0.159	---	17.3	---	
Trichloroethylene	0.010	0.050	---	16.8	---	
Trichlorofluoromethane	0.010	---	---	---	---	
Trichloropropane	0.010	---	---	---	---	
Vinyl chloride	0.010	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-7  
Field Sample No. 1-FCD2-SB3-SS14-50-170  
Date Collected 4-11-86  
Date Received 4-15-86  
Date Analyzed 4-21-86  
QC Report No. 8010-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB3-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36546-6  
Field Sample No. 1-FCD2-SB4-SS2-2.5-ITC  
Date Collected 4-12-86  
Date Received 4-15-86  
Date Analyzed 4-21-86  
QC Report No. 8010-24

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB4-SS2-2.5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36546-8  
Field Sample No. 1-FCD2-SB4-SS5-10-ITC  
Date Collected 4-12-86  
Date Received 4-15-86  
Date Analyzed 4-23-86  
QC Report No. 8010-24

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB4-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.025	---	13.3	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-8  
Field Sample No. 1-FCD2-SB4-SS10-3C-ITC  
Date Collected 4-12-86  
Date Received 4-15-86  
Date Analyzed 4-21-86  
QC Report No. 8010-24

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

1-FCD2-SB4-SS10-30-171

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36546-7  
Field Sample No. 1-FCD2-SB5-SS2-2.5-ITC  
Date Collected 4-12-86  
Date Received 4-15-86  
Date Analyzed 4-23-86  
QC Report No. 8010-24

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB5-SS2-2.5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.034	---	13.3	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36546-6  
Field Sample No. 1-FCD2-SB5-SS5-10-ITC  
Date Collected 4-12-86  
Date Received 4-15-86  
Date Analyzed 4-23-86  
QC Report No. 8010-24

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

Figure 1 is a schematic representation of the experimental design. It shows a sequence of events: a subject is presented with a stimulus (a face), then a response is recorded (a button press), and finally, the subject is presented with a feedback stimulus (a face). The sequence is labeled with 'Stimulus', 'Response', and 'Feedback'.

[illegible]

4. - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 1-FCD2-SB5-SS5-10-ITC

Duplicates 36546-8, 36546-18

Spike 36546-19

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

QC Report No. 8020-22

Date Analyzed 5-14-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Spike Source 10 ppb 602 std.

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	<0.005	0.035	70	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.038	72	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.038	70	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.040	71	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.039	74	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.039	72	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.037	64	
Xylenes (Dimethyl benzene)	ND< 0.005	---	---	---	---	<0.005	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-7  
Field Sample No. 1-FCD2-SB3-SS5-10-ITC  
Date Collected 4-11-86  
Date Received 4-14-86  
Date Analyzed c 4-25-86, 5-1-86  
QC Report No. 8020-22

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor c Conc., 1:1000  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	5.0	ND<5.0	---	---	---	
1,3-Dichlorobenzene	5.0	ND<5.0	---	---	---	
1,4-Dichlorobenzene	5.0	ND<5.0	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

c - Dilutions were made in order to quantitate and due to matrix effects.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-9  
Field Sample No. 1-FCD2-SB3-SS10-30-ITC  
Date Collected 4-11-86  
Date Received 4-14-86  
Date Analyzed c 4-25-86, 5-1-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor c Conc., 1:100  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.5	ND<0.5	---	---	---	
1,3-Dichlorobenzene (d)	0.5	ND<0.5	---	---	---	
1,4-Dichlorobenzene (d)	0.5	ND<0.5	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

(d) - At this concentration the components co-elute. The amount reported is total.

c - Dilutions were made in order to quantitate and due to matrix effects.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36546-8  
Field Sample No. 1-FCD2-SB3-SS14-50-ITC  
Date Collected 4-11-86  
Date Received 4-14-86  
Date Analyzed 4-25-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

(d) - Compounds co-elute at this concentration. Amount reported is total.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client AF Plant 42 IRP-II  
Project AF Plant 42 IRP-II  
Client No.                       
Laboratory Supervisor Approval:                                     

Lab Sample No. 36546-6, 36546-8  
Field Sample No. 1-FCD2-SB4-SS2-2.5-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-25-86, 5-1-86  
QC Report No. 8020-22

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                     

Dilution Factor Conc., 1:500  
\*Moisture                      %

Spike Source                                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene c	0.50	<sup>0.5</sup> ND< <del>0.005</del>	---	---	---	
1,3-Dichlorobenzene c	0.50	<sup>0.5</sup> ND< <del>0.005</del>	---	---	---	
1,4-Dichlorobenzene c	0.50	<sup>0.5</sup> ND< <del>0.005</del>	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

c - Dilutions were made due to matrix effects.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                       
Project AF Plant 42 IRP-II  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 36546-7  
Field Sample No. 1-FCD2-SB4-SS5-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-28-86  
QC Report No. 8020-22

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-5  
Field Sample No. 1-FCD2-SB4-SS10-30-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-25-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36546-7  
Field Sample No. 1-FCD2-SB5-SS2-2.5-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed c 4-28-86, 5-1-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor c Conc., 1:5000  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	5.0	ND<5.0	---	---	---	
1,3-Dichlorobenzene	5.0	ND<5.0	---	---	---	
1,4-Dichlorobenzene	5.0	ND<5.0	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

c - Dilutions of sample were due to matrix effects.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-8  
Field Sample No. 1-FCD2-SB5-SS5-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-28-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-18 Dup.  
Field Sample No. 1-FCD2-SB5-SS5-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 5-14-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
xylene (Dimethyl benzene)	0.005	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36546-19 Spike  
Field Sample No. 1-FCD2-SB5-SS5-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 5-14-86  
QC Report No. 8020-22

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.035	---	2.5	---	
Chlorobenzene	0.005	0.038	---	7.8	---	
1,2-Dichlorobenzene	0.005	0.038	---	14.3	---	
1,3-Dichlorobenzene	0.005	0.040	---	12.8	---	
1,4-Dichlorobenzene	0.005	0.039	---	12.7	---	
Ethyl benzene	0.005	0.039	---	7.3	---	
Toluene	0.005	0.037	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park S., Suite 590  
Atlanta, GA 30329-2213

October 8, 1986

Attn: M.A. Guthrie

Page 1 of 38

April 14, 1986

56394

36555/njc

#### REVISED REPORT

Nine (9) soil samples.

<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
1-FCD2-SB5-SS10-30-ITC	4-12-86	1030
1-FCD2-SB5-SS15-10-ITC	4-12-86	1030
1-FCD2-SB6-SS3-5-ITC	4-12-86	1230
1-FCD2-SB6-SS8-20-ITC	4-12-86	1230
1-FCD2-SB7-SS5-10-ITC	4-14-86	0900
1-FCD2-SB7-SS10-30-ITC	4-14-86	0900
1-FCD2-SB7-SS14-50-ITC	4-14-86	0900
1-FCD2-SB7-SS15-30-ITC	4-14-86	0900
1-FCD2-SB7-SS18-70-ITC	4-14-86	0900

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

In addition, the samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

The samples were also extracted according to EPA Method 3550 and analyzed for Total Petroleum Hydrocarbons (TPH) according to EPA Method 418.1. The sample results are listed in Table I.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard L. Merrell*

Richard L. Merrell  
Laboratory Director

Engineering Science  
M.A. Guthrie

April 30, 1986  
JN: 36555 - Page 2

Table I

<u>Sample Identifications</u>	<u>Total Petroleum Hydrocarbons Micrograms/gram</u>
1-FCD2-SB6-SS3-5-ITC	4800
1-FCD2-SB7-SS18-70-ITC	ND<2
1-FCD2-SB7-SS5-10-ITC	8200
1-FCD2-SB5-SS15-10-ITC	ND<2
1-FCD2-SB7-SS10-30-ITC	240
1-FCD2-SB7-SS14-50-ITC	2000
1-FCD2-SB5-SS10-30-ITC	2
1-FCD2-SB7-SS15-30-ITC	220
1-FCD2-SB6-SS8-20-ITC	ND<2
1-FCD2-SB6-SS8-20-ITC Duplicate	ND<2
1-FCD2-SB6-SS8-20-ITC Spike	31
Spike Concentration	33

Percent Recovery - 94%

Relative Percent Difference - N/A

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 1-FCD2-SB7-SS18-70-ITC

Duplicates 36555-14, 36555-15

Spike 36555-16

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Spike Source

QC Report No. 8010-26

Date Analyzed 4-24-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture --- %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroisopropyl)ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromodichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.054	108	
Bromoform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.047	94	
Bromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Carbon tetrachloride	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.051	102	
Chloroacetaldehyde	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloral	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.044	88	
Chloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloroform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
1-Chlorohexane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorotoluene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Dibromochloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.160	103	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB7-SS18-70-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.051	102	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.053	106	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.044	88	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.054	108	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.047	94	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.049	98	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	ND< 0.010	0.160	103	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	ND< 0.010	0.095	95	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	ND< 0.010	0.095	95	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.042	84	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	ND< 0.010	0.160	103	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.052	104	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36555-6  
Field Sample No. 1-FCD2-SB5-SS10-30-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB5-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.018	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-7  
Field Sample No. 1-FCD2-SB5-SS15-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB5-SS15-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.024	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36555-8  
Field Sample No. 1-FCD2-SB6-SS3-5-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB6-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.027	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-9  
Field Sample No. 1-FCD2-SB6-SS8-30-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chloronexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloroethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB6-SS8-<sup>20</sup>~~30~~-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                       
Project AF Plant 42 IRP-II  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 36555-10  
Field Sample No. 1-FCD2-SB7-SS5-10-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB7-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36555-11  
Field Sample No. 1-FCD2-SB7-SS10-30-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

AD-A190 943

INSTALLATION RESTORATION PROGRAM PHASE 2

CONFIRMATION/QUANTIFICATION STAG (U)

ENGINEERING-SCIENCE INC PASADENA CALIF

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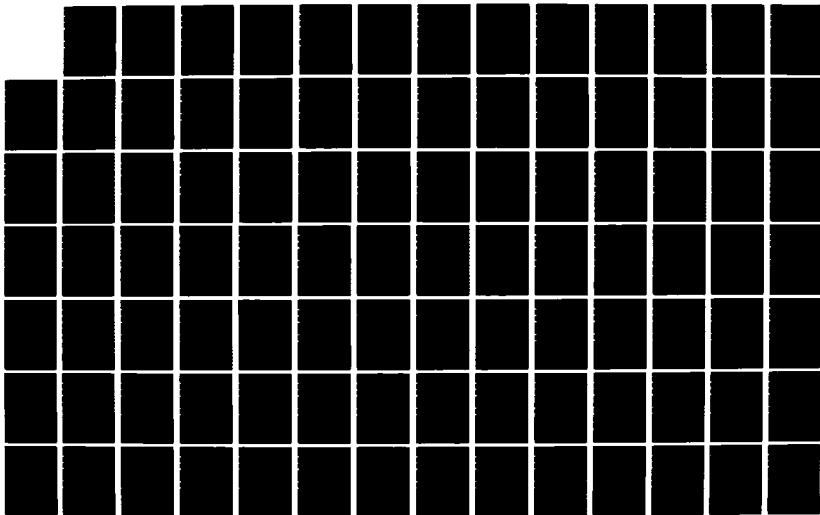
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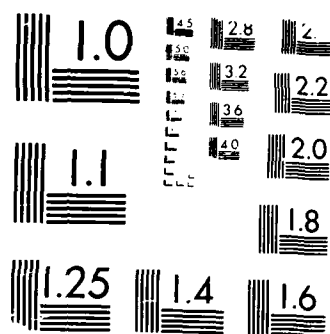
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MICROCOPY RESOLUTION TEST CHART  
 NATIONAL BUREAU OF STANDARDS-1963-A



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB7-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-12  
Field Sample No. 1-FCD2-SB7-SS14-50-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB7-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.013	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42 IRP-II

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 36555-13

Field Sample No. 1-FCD2-SB7-SS15-30-ITC

Date Collected 4-14-86

Date Received 4-14-86

Date Analyzed 4-24-86

QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Dilution Factor N/A

\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	-	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB7-SS15-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                       
Project AF Plant 42 IRP-II  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 36555-14  
Field Sample No. 1-FCD2-SB7-SS18-70-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB7-SS18-70-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-15 Duplicate  
Field Sample No. 1-FCD2-SB7-SS18-70-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Duplicate  
1-FCD2-SB7-SS18-70-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-16 Spike \_\_\_\_\_  
Field Sample No. 1-FCD2-SB7-SS18-70-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-24-86  
QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.054	---	14.2	---	
Bromoform	0.010	0.047	---	19.4	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.051	---	13.8	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.044	---	24.2	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.052	---	11.4	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.160	---	16.9	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Spike  
1-FCD2-SB7-SS18-70-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.051	---	10.3	---	
1,2-Dichloroethane	0.010	0.053	---	12.2	---	
1,1-Dichloroethylene	0.010	0.044	---	9.2	---	
trans-1,2-dichloroethylene	0.010	0.054	---	11.1	---	
Dichloromethane	0.010	0.047	---	6.6	---	
1,2-Dichloropropane	0.010	0.049	---	15.5	---	
1,3-Dichloropropylene	0.010	0.160	---	16.9	---	
1,1,2,2-Tetrachloroethane	0.010	0.095	---	21.8	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.095	---	21.8	---	
1,1,1-Trichloroethane	0.010	0.042	---	13.4	---	
1,1,2-Trichloroethane	0.010	0.160	---	16.9	---	
Trichloroethylene	0.010	0.052	---	16.4	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 1-FCD2-SB5-SS15-10-ITC

Duplicates 36555-7, 36555-9

Spike 36555-10

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

QC Report No. 8020-21

Date Analyzed 4-22-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Spike Source 10.0 ppb 602 Std.

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.04	80	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.04	80	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.04	80	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.05	<del>85</del> 100	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.04	80	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.04	80	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.05	ND< 0.005	0.04	<del>85</del> 80	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	---	ND< 0.005	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-9  
Field Sample No. 1-FCD2-SB5-SS10-30-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-17-86  
QC Report No. 8020-21

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	0.046	---	14.50	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36555-7  
Field Sample No. 1-FCD2-SB5-SS15-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-17-86  
QC Report No. 8020-21

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil(ug/g)  
☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-8  
Field Sample No. 1-FCD2-SB6-SS3-5-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-17-86  
QC Report No. 8020-21

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-7  
Field Sample No. 1-FCD2-SB6-SS8-20-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-18-86  
QC Report No. 8020-21

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-9  
Field Sample No. 1-FCD2-SB7-SS5-10-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-18-86  
QC Report No. 8020-21

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil(ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-8  
Field Sample No. 1-FCD2-SB7-SS10-30-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-18-86  
QC Report No. 8020-21

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-6  
Field Sample No. 1-FCD2-SB7-SS14-50-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-22-86  
QC Report No. 8020-21

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	0.024	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-7  
Field Sample No. 1-FCD2-SB7-SS15-30-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-22-86  
QC Report No. 8020-21

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36555-8  
Field Sample No. 1-FCD2-SB7-SS18-70-ITC  
Date Collected 4-14-86  
Date Received 4-14-86  
Date Analyzed 4-22-86  
QC Report No. 8020-21

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-9 Duplicate  
Field Sample No. 1-FCD2-SB5-SS15-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-22-86  
QC Report No. 8020-21

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36555-10 Spike  
Field Sample No. 1-FCD2-SB5-SS15-10-ITC  
Date Collected 4-12-86  
Date Received 4-14-86  
Date Analyzed 4-22-86  
QC Report No. 8020-21

Sample Matrix:

☐/ Water (ug/L)  
☒/ Soil(ug/g)  
☐/ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.040	---	2.6	---	
Chlorobenzene	0.005	0.040	---	7.9	---	
1,2-Dichlorobenzene	0.005	0.040	---	14.4	---	
1,3-Dichlorobenzene	0.005	0.05	---	12.9	---	
1,4-Dichlorobenzene	0.005	0.040	---	12.71	---	
Ethyl benzene	0.005	0.040	---	7.3	---	
Toluene	0.005	0.040	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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# ANALYTICAL SERVICES

17615 Highway 101 • San Marcos, California 92071 • (714) 921-9831 • (714) 523-9200



## CERTIFICATE OF ANALYSIS

Client: Engineering Science  
57 Executive Park St., Suite 590  
Atlanta, GA 30929-2213

Date: October 9, 1986

Attn: M.A. Guthrie

Received: April 17, 1986

Sample ID: 56394

Analyst: 36574/rjc

### REVISED REPORT

Eight (8) samples labeled:

<u>Sample Number</u>	<u>Date</u>	<u>Time</u>
1-FCD2-SB8-SS5-10-ITC	4-15-86	0930
1-FCD2-SB8-SS10-30-ITC	4-15-86	0930
1-FCD2-SB8-SS14-50-ITC	4-15-86	0930
1-FCD2-SB9-SS5-10-ITC	4-16-86	0830
1-FCD2-SB9-SS8-20-ITC	4-16-86	0830
1-FCD2-SB9-SS11-35-ITC	4-16-86	0830
1-FCD2-SB9-SS14-50-ITC	4-16-86	0830
1-FCD2-SB9-SS18-70-ITC	4-16-86	0830

The samples were analyzed for total petroleum hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed in table I.

The samples were also analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010. The results are listed on the Halogenated Volatile Organics Summary sheets.

Also, the samples were analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the Aromatic Volatile Organics Summary sheets.

*William P. Fassinger*  
William P. Fassinger  
Chemist

*Richard L. Merrell*  
Richard L. Merrell  
Laboratory Director

Engineering Science  
M.A. Guthrie

June 30, 1986  
JN: 36574 - Page 2

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Date of Analysis: 4-29-86

Table I

Total Petroleum Hydrocarbons

<u>Sample Identification</u>	<u>Parts per million</u>
1-FCD2-SB8-SS5-10-ITC	3200
1-FCD2-SB8-SS10-30-ITC	8
1-FCD2-SB8-SS14-50-ITC	3
1-FCD2-SB9-SS5-10-ITC	6
1-FCD2-SB9-SS8-20-ITC	3
1-FCD2-SB9-SS11-35-ITC	3
1-FCD2-SB9-SS14-50-ITC	3
1-FCD2-SB9-SS14-50-ITC Dup.	3
1-FCD2-SB9-SS14-50-ITC Spike	22
1-FCD2-SB9-SS18-70-ITC	3
Spike concentration	23

Relative Percent Difference - 0.00%

Percent Recovery - 83%

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client   
Project AF Plant 42 IRP II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36574-5  
Field Sample No. 1-FCD2-SB9-SS11-35-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 4-25-86  
QC Report No. 8010-26

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A  
\*Moisture N/A %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No: 1-FCD2-SB9-SS11-35-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

W.P. Flanagan

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Lab Sample No. 36574-6  
Field Sample No. 1-FCD2-SB9-SS14-50-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 4-25-86  
QC Report No. 8010-26

Dilution Factor N/A

\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No: 1-FCD2-SB9-SS14-50-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:  
[Signature]

Lab Sample No. 36574-7  
Field Sample No. 1-FCD2-SB8-SS5-10-ITC  
Date Collected 4-15-86  
Date Received 4-17-86  
Date Analyzed 4-25-86  
QC Report No. 8010-26

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No.: 1-FCD2-SB8-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.014	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

[Signature]  
Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Lab Sample No. 36574-8  
Field Sample No. 1-FCD2-SB8-SS14-50-ITC  
Date Collected 4-15-86  
Date Received 4-17-86  
Date Analyzed 4-25-86  
QC Report No. 8010-26

Dilution Factor N/A  
\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No.: 1-FCD2-SB8-SS14-50-110

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.017	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42 IRP II

Client No.

Laboratory Supervisor Approval:

W. J. H. H. H.

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Spike Source

Lab Sample No. 36574-9

Field Sample No. 1-FCD2-SB9-SS5-10-ITC

Date Collected 4-16-86

Date Received 4-17-86

Date Analyzed 4-25-86

QC Report No. 8010-26

Dilution Factor N/A

\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No.: 1-FCD2-SB9-SS5-10-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

WPT

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Lab Sample No. 36574-10  
Field Sample No. 1-FCD2-SB9-SS8-20-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 4-25-86  
QC Report No. 8010-26

Dilution Factor N/A

\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No.: 1-FCD2-SB9-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394

Client

Project AF Plant 42 IRP II

Client No.

Laboratory Supervisor Approval:

W.P. Fisk

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Spike Source

Lab Sample No. 36574-11

Field Sample No. 1-FCD2-SB9-SS18-70-ITC

Date Collected 4-16-86

Date Received 4-17-86

Date Analyzed 4-25-86

QC Report No. 8010-26

Dilution Factor N/A

\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No.: 1-FCD2-SB9-SS18-70-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

W.P. Fanning

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Spike Source \_\_\_\_\_

Lab Sample No. 36574-12  
Field Sample No. 1-FCD2-SB8-SS10-30-ITC  
Date Collected 4-15-86  
Date Received 4-17-86  
Date Analyzed 4-25-86  
QC Report No. 8010-26

Dilution Factor N/A  
\*Moisture N/A %

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Field Sample No.: 1-FCD2-SB8-SS10-30-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.019	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36574-7  
Field Sample No. 1-FCD2-SB8-SS10-30-ITC  
Date Collected 4-15-86  
Date Received 4-17-86  
Date Analyzed 5-5-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture N/A %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36574-11  
Field Sample No. 1-FCD2-SB8-SS14-50-ITC  
Date Collected 4-15-86  
Date Received 4-17-86  
Date Analyzed 5-1-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36574-6  
Field Sample No. 1-FCD2-SB9-SS5-10-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 5-5-86  
QC Report No. 8020-22

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36574-5  
Field Sample No. 1-FCD2-SB9-SS8-20-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 5-5-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture N/A %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36574-11  
Field Sample No. 1-FCD2-SB9-SS11-35-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 5-2-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36574-12  
Field Sample No. 1-FCD2-SB9-SS14-50-ITC  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 5-2-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36574-10  
Field Sample No. 1-PCD2-SB9-SS18-70-17C  
Date Collected 4-16-86  
Date Received 4-17-86  
Date Analyzed 5-1-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client   
Project AF Plant 42 IRP II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. c 36574-5, 36574-8  
Field Sample No. 1-FCD2-SB8-SS5-10-ITC  
Date Collected 4-15-86  
Date Received 4-17-86  
Date Analyzed 5-6-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other

Dilution Factor c 1:1000, Conc.  
\*Moisture N/A %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	8.4	---	12.9	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	2.4	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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## ANALYTICAL SERVICES



174-41-01 • 174-41-02 • 174-41-03 • 174-41-04 • 174-41-05 • 174-41-06 • 174-41-07 • 174-41-08 • 174-41-09 • 174-41-10 • 174-41-11 • 174-41-12 • 174-41-13 • 174-41-14 • 174-41-15 • 174-41-16 • 174-41-17 • 174-41-18 • 174-41-19 • 174-41-20 • 174-41-21 • 174-41-22 • 174-41-23 • 174-41-24 • 174-41-25 • 174-41-26 • 174-41-27 • 174-41-28 • 174-41-29 • 174-41-30 • 174-41-31 • 174-41-32 • 174-41-33 • 174-41-34 • 174-41-35 • 174-41-36 • 174-41-37 • 174-41-38 • 174-41-39 • 174-41-40 • 174-41-41 • 174-41-42 • 174-41-43 • 174-41-44 • 174-41-45 • 174-41-46 • 174-41-47 • 174-41-48 • 174-41-49 • 174-41-50 • 174-41-51 • 174-41-52 • 174-41-53 • 174-41-54 • 174-41-55 • 174-41-56 • 174-41-57 • 174-41-58 • 174-41-59 • 174-41-60 • 174-41-61 • 174-41-62 • 174-41-63 • 174-41-64 • 174-41-65 • 174-41-66 • 174-41-67 • 174-41-68 • 174-41-69 • 174-41-70 • 174-41-71 • 174-41-72 • 174-41-73 • 174-41-74 • 174-41-75 • 174-41-76 • 174-41-77 • 174-41-78 • 174-41-79 • 174-41-80 • 174-41-81 • 174-41-82 • 174-41-83 • 174-41-84 • 174-41-85 • 174-41-86 • 174-41-87 • 174-41-88 • 174-41-89 • 174-41-90 • 174-41-91 • 174-41-92 • 174-41-93 • 174-41-94 • 174-41-95 • 174-41-96 • 174-41-97 • 174-41-98 • 174-41-99 • 174-41-100

### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park So.  
Suite 590  
Atlanta, GA 30329-2213

October 9, 1986

Attn: M.A. Guthrie

Page 1 of 22

April 19, 1986

56394MAG

36608rjc

#### REVISED REPORT

Ten (10) soil samples.

<u>SAMPLE IDENTIFICATION</u>	<u>DATE</u>	<u>TIME</u>
1-FCD2-SB11-SS1-3-ITC	4-16-86	1100
1-FCD2-SB12-SS1-3-ITC	4-16-86	1130
7-ERA2-SB5-SS5-10-ITC	4-17-86	0845
7-ERA2-SB5-SS10-30-ITC	4-17-86	0845
7-ERA2-SB5-SS14-50-ITC	4-17-86	0845
7-ERA2-SB5-SS20-80-ITC	4-17-86	0845
9-PWW2-SB1-SS1-3-ITC	4-17-86	1400
9-PWW2-SB2-SS1-3-ITC	4-17-86	1400
7-ERA2-SB5-SS24-100-ITC	4-18-86	0800
7-ERA2-SB5-SS26-120-ITC	4-18-86	0800

Four of the samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

Four of the samples were also analyzed for aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

Eight of the samples were analyzed for total petroleum hydrocarbons (TPH) by infrared spectroscopy technique (TPH, 418.1). The results are listed in Table I.

*William P. Fassinger*

William P. Fassinger  
Chemist

*Richard F. Mow*

Eric W. Lindsay  
Laboratory Manager I

Two of the samples were analyzed for Oil and Grease by infrared spectroscopy technique (SW 3550 followed by EPA procedure 413.2). The results are listed in Table II.

Two of the samples were analyzed for Phenol according to Standard Methods for the Examination of Water and Wastewater, Methods 510A and 510C. The results are listed in the following summary sheets.

Table I

SAMPLE: ES Job No. 56394, AF Plant 42 IRP-II  
DATE OF ANALYSIS: 4-30-86

<u>Sample Identification</u>	<u>Total Petroleum Hydrocarbons (ug/g)</u>
7-ERA2-SB5-SS26-120-ITC	114
7-ERA2-SB5-SS26-120-ITC Duplicate	137
7-ERA2-SB5-SS26-120-ITC Spike	160
Spike Concentration	25
7-ERA2-SB5-SS24-100-ITC	6700
7-ERA2-SB5-SS5-10-ITC	3
7-ERA2-SB5-SS10-30-ITC	15000
7-ERA2-SB5-SS14-50-ITC	3100
7-ERA2-SB5-SS20-80-ITC	160
1-FCO2-SB12-SS1-3-ITC	4
1-FCO2-SB11-SS1-3-ITC	17

Relative Percent Difference - 18%

Percent Recovery -138%

Table II

SAMPLE: ES Job No. 56394, AF Plant 42 IRP-II  
DATE OF ANALYSIS: 4-30-86

<u>Sample Identification</u>	<u>Total Petroleum Hydrocarbons (ug/g)</u>
9-PWW2-SB2-SS1-3-ITC	2
9-PWW2-SB1-SS1-3-ITC	3
9-PWW2-SB1-SS1-3-ITC Duplicate	4
9-PWW2-SB1-SS1-3-ITC Spike	22
Spike Concentration	25

Relative Percent Difference - 29%

Percent Recovery - 77%

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ES Job No. 56394

Client

Project No. AF Plant 42 IRP-II

Client No.

Date Collected 4-17-86

Date Received 4-19-86

Sample Matrix:

// Water (ug/L)

/X/ Soil (ug/ml)

Other

QC Report No. 66700-9  
Laboratory Supervisor Approval:

Dilution Factor

\* Moisture

[illegible]

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.





QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 1-FCD2-SB12-SS1-3-ITC

Duplicates 36608-6, 36608-9

Spike 36608-11

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Spike Source

QC Report No. 8010-27

Date Analyzed 4-28-86

Laboratory Supervisor Approval:

Dilution Factor

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroisopropyl)ether	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromobenzene	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromodichloromethane	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
Bromoform	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.045	92	
Bromomethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Carbon tetrachloride	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
Chloroacetaldehyde	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloral	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorobenzene	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.044	88	
Chloroethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloroform	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.049	98	
1-Chlorohexane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethyl methyl ether	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorotoluene	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Dibromochloromethane	<0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.153	99	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB12-SS1-3-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Dichlorodifluoromethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
1,1-Dichloroethane	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
1,2-Dichloroethane	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.051	102	
1,1-Dichloroethylene	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.039	78	
trans-1,2-dichloroethylene	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.047	94	
Dichloromethane	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.047	94	
1,2-Dichloropropane	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
1,3-Dichloropropylene	<0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.153	99	
1,1,2,2-Tetrachloroethane	<0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.115	115	
1,1,1,2-Tetrachloroethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Tetrachloroethylene	<0.010	ND< 0.010	ND< 0.010	---	0.100	<0.010	0.115	115	
1,1,1-Trichloroethane	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.044	88	
1,1,2-Trichloroethane	<0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.153	99	
Trichloroethylene	<0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.048	96	
Trichlorofluoromethane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Trichloropropane	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Vinyl chloride	<0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36608-5  
Field Sample No. 1-FCD2-SB11-SS1-3-ITC  
Date Collected 4-16-86  
Date Received 4-19-86  
Date Analyzed 4-28-86  
QC Report No. 8010-27

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB11-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-6  
Field Sample No. 1-FCD2-SB12-SS1-3-ITC  
Date Collected 4-16-86  
Date Received 4-19-86  
Date Analyzed 4-28-86  
QC Report No. 8010-27

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

1-FCD2-SB12-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36608-7  
Field Sample No. 9-PWW2-SB1-SS1-3-ITC  
Date Collected 4-17-86  
Date Received 4-19-86  
Date Analyzed 4-28-86  
QC Report No. 8010-27

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

9-PWW2-SB1-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.011	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-8  
Field Sample No. 9-PWW2-SB2-SS1-3-ITC  
Date Collected 4-17-86  
Date Received 4-19-86  
Date Analyzed 4-28-86  
QC Report No. 8010-27

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

9-PWW2-SB2-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-9 Duplicate  
Field Sample No. 1-FCD2-SB12-SS1-3-ITC  
Date Collected 4-16-86  
Date Received 4-19-86  
Date Analyzed 4-28-86  
QC Report No. 8010-27

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Duplicate  
1-FC02-SB12-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-11 Spike  
Field Sample No. 1-FCD2-SB12-SS1-3-ITC  
Date Collected 4-16-86  
Date Received 4-19-86  
Date Analyzed 4-28-86  
QC Report No. 8010-27

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.048	---	14.2	---	
Bromoform	0.010	0.046	---	19.4	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.048	---	13.8	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.044	---	24.2	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.049	---	11.5	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.153	---	17.0	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Spike  
1-FCD2-SB12-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.048	---	10.3	---	
1,2-Dichloroethane	0.010	0.051	---	12.2	---	
1,1-Dichloroethylene	0.010	0.039	---	9.3	---	
trans-1,2-dichloroethylene	0.010	0.047	---	11.1	---	
Dichloromethane	0.010	0.047	---	6.7	---	
1,2-Dichloropropane	0.010	0.052	---	15.6	---	
1,3-Dichloropropylene	0.010	0.153	---	15.8	---	
1,1,2,2-Tetrachloroethane	0.010	0.115	---	21.8	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.115	---	21.8	---	
1,1,1-Trichloroethane	0.010	0.044	---	13.4	---	
1,1,2-Trichloroethane	0.010	0.153	---	17.0	---	
Trichloroethylene	0.010	0.048	---	16.4	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-7  
Field Sample No. 1-FCD2-SB11-SS1-3-ITC  
Date Collected 4-16-86  
Date Received 4-19-86  
Date Analyzed 5-2-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36608-9  
Field Sample No. 1-FCD2-SB12-SS1-3-ITC  
Date Collected 4-16-86  
Date Received 4-19-86  
Date Analyzed 5-2-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	0.007c	---	12.5	---	
1,4-Dichlorobenzene	0.005	0.007c	---	12.5	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

c - These isomers co-elute at this concentration. Amount reported is total.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-8  
Field Sample No. 9-PWW2-SB1-SS1-3-ITC  
Date Collected 4-17-86  
Date Received 4-19-86  
Date Analyzed 5-2-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36608-10  
Field Sample No. 9-PWW2-SB2-SS1-3-ITC  
Date Collected 4-17-86  
Date Received 4-19-86  
Date Analyzed 5-2-86  
QC Report No. 8020-22

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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# ANALYTICAL SERVICES



## CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park So., Suite 590  
Atlanta, GA 30329-2213

October 9, 1986

Attn: M.A. Guthrie

April 23, 1986

56394

36658/rjc

### REVISED REPORT

Eight (8) soil samples.

The samples were analyzed for Total Petroleum Hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed below.

Sample: ES Job No. 56394, AF Plant 42 IRP-II

Date of Analysis: 5-1-86

<u>Date</u>	<u>Time</u>	<u>Sample Identification Number</u>	<u>Total Petroleum Hydrocarbons (ug/g)</u>
04-22-86	0800	7-ERA2-SB6-SS24-100-ITC	4
		7-ERA2-SB6-SS24-100-ITC Dup	5
		7-ERA2-SB6-SS24-100-ITC Spike	25
		Spike Concentration	23
04-21-86	1130	7-ERA2-SB6-SS10-30-ITC	4750
04-18-86	0800	7-ERA2-SB5-SS29-150-ITC	3600
04-18-86	0800	7-ERA2-SB5-SS31-170-ITC	6
04-21-86	1130	7-ERA2-SB6-SS18-70-ITC	8
04-19-86	0800	7-ERA2-SB5-SS34-200-ITC	4
04-21-86	1130	7-ERA2-SB6-SS14-50-ITC	2
04-21-86	1130	7-ERA2-SB6-SS5-10-ITC	ND<2

Relative Percent Difference - 22.2%

Percent Recovery - 89.1%

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

*David S. Tripp*  
David S. Tripp  
Chemist

*Eric W. Lindsay*  
Eric W. Lindsay  
Laboratory Manager

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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES



### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park S., Suite 590  
Atlanta, GA 30329-2213

October 9, 1986

Attn: M.A. Guthrie

Page 1 of 21

April 24, 1986

56394

36675 rpg

#### REVISED REPORT

Four (4) soil samples, and Three (3) water samples.

<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
7-ERA2-SB7-SS5-10-ITC	4-22-86	1230
7-ERA2-SB7-SS10-30-ITC	4-22-86	1230
7-EPA2-SB7-SS14-50-ITC	4-22-86	1230
7-ERA2-SB7-SS15-10-ITC	4-22-86	1230

<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
DW2-1-ITC	4-23-86	1030
DW4-1-ITC	4-23-86	1100
DW4-2-ITC	4-23-86	1100

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 601. The results are listed on the Purgeable Halogenated Summary Sheets.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 602. The results are listed on the Aromatic Volatile Organics sheets.

The four soil samples were analyzed for total petroleum hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed below.

*William P. Fassano*

William P. Fassano  
Chemist

*Eric W. Lindsay*

Eric W. Lindsay  
Laboratory Manager

Eng. Sci.  
M.A. Guthrie

July 5, 1986  
JN: 36675 - Page 2

Two water samples were digested with acid and analyzed by A.A.S. The results are listed on the Metals summary sheets.

The water samples were also analyzed for Cyanide according to Standard Methods for the Examination of Water and Wastewater, Method 412E. The results are listed in the A.R.S. Metals and Q.C.R.S. Metals summary sheets, also in the A.R.S. and Q.C.R.S. Environmental Quality Parameters summary sheets.

Total Petroleum Hydrocarbons

SAMPLE: ES Job No. 56394, AF Plant 42, IRP-II  
DATE OF ANALYSIS: 5-1-86

<u>Sample Identification</u>	<u>Micrograms/grams</u>
7-ERA2-SB7-SS5-10-ITC	ND<2
7-ERA2-SB7-SS10-30-ITC	ND<2
7-ERA2-SB7-SS14-50-ITC	3
7-ERA2-SB7-SS15-10-ITC	3
7-ERA2-SB7-SS15-10-ITC Duplicate	2
7-ERA2-SB7-SS15-10-ITC Spike	20
Spike Concentration	23

Relative Percent Difference - 40.0%

Percent Recovery - 76.1%

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



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	Water (ug/L)	Soil (ug/ml)
1	1.0	1.0
2	1.0	1.0
3	1.0	1.0
4	1.0	1.0
5	1.0	1.0
6	1.0	1.0
7	1.0	1.0
8	1.0	1.0
9	1.0	1.0
10	1.0	1.0
11	1.0	1.0
12	1.0	1.0
13	1.0	1.0
14	1.0	1.0
15	1.0	1.0
16	1.0	1.0
17	1.0	1.0
18	1.0	1.0
19	1.0	1.0
20	1.0	1.0
21	1.0	1.0
22	1.0	1.0
23	1.0	1.0
24	1.0	1.0
25	1.0	1.0
26	1.0	1.0
27	1.0	1.0
28	1.0	1.0
29	1.0	1.0
30	1.0	1.0
31	1.0	1.0
32	1.0	1.0
33	1.0	1.0
34	1.0	1.0
35	1.0	1.0
36	1.0	1.0
37	1.0	1.0
38	1.0	1.0
39	1.0	1.0
40	1.0	1.0
41	1.0	1.0
42	1.0	1.0
43	1.0	1.0
44	1.0	1.0
45	1.0	1.0
46	1.0	1.0
47	1.0	1.0
48	1.0	1.0
49	1.0	1.0
50	1.0	1.0
51	1.0	1.0
52	1.0	1.0
53	1.0	1.0
54	1.0	1.0
55	1.0	1.0
56	1.0	1.0
57	1.0	1.0
58	1.0	1.0
59	1.0	1.0
60	1.0	1.0
61	1.0	1.0
62	1.0	1.0
63	1.0	1.0
64	1.0	1.0
65	1.0	1.0
66	1.0	1.0
67	1.0	1.0
68	1.0	1.0
69	1.0	1.0
70	1.0	1.0
71	1.0	1.0
72	1.0	1.0
73	1.0	1.0
74	1.0	1.0
75	1.0	1.0
76	1.0	1.0
77	1.0	1.0
78	1.0	1.0
79	1.0	1.0
80	1.0	1.0
81	1.0	1.0
82	1.0	1.0
83	1.0	1.0
84	1.0	1.0
85	1.0	1.0
86	1.0	1.0
87	1.0	1.0
88	1.0	1.0
89	1.0	1.0
90	1.0	1.0
91	1.0	1.0
92	1.0	1.0
93	1.0	1.0
94	1.0	1.0
95	1.0	1.0
96	1.0	1.0
97	1.0	1.0
98	1.0	1.0
99	1.0	1.0
100	1.0	1.0

QC Report No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Analyte Metal	Laboratory Sample Nos.		Date Anal.	** Anal. Method	Duplicates		Spiked Recovery			Notes
	Duplicates	Spike			Blank	C1	C2	RPD	SA	
Cyanide	NOT ENOUGH SAMPLE RECEIVED TO RUN SPIKE OR DUPLICATE FOR EITHER SAMPLE.									

NOT ENOUGH SAMPLE RECEIVED TO RUN SPIKE OR DUPLICATE FOR EITHER SAMPLE.

[illegible]

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

QUALITY CONTROL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

Lab Sample Nos. DW4-2-ITC  
Duplicates 36675-10, 36675-12  
Spike 36675-13

QC Report No. 601-28  
Date Analyzed 4-29-86  
Laboratory Supervisor Approval:

Sample Matrix:

☒ / Water (ug/L)  
☐ / Soil  
☐ / Other

*W.P. [Signature]*  
Dilution Factor N/A  
\*Moisture N/A %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Bis(2-Chloroethoxy)methane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Bis(2-Chloroisopropyl)ether	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Bromobenzene	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Bromodichloromethane	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.2	112	
Bromoform	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.6	116	
Bromomethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Carbon tetrachloride	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.9	119	
Chloroacetaldehyde	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Chloral	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Chlorobenzene	ND< 1.0	ND< 1.0	ND< 1.0	---	1.0	<1.0	10.8	108	
Chloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Chloroform	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.9	119	
1-Chlorohexane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
2-Chloroethyl vinyl ether	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Chloromethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Chloromethyl methyl ether	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Chlorotoluene	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Dibromochloromethane	ND< 1.0	ND< 1.0	ND< 1.0	---	31.0	<1.0	37.8	122	

QUALITY CONTROL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW4-2-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Dichlorodifluoromethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
1,1-Dichloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.6	116	
1,2-Dichloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.2	112	
1,1-Dichloroethylene	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	14.4	144	
trans-1,2-dichloroethylene	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	10.7	107	
Dichloromethane	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	11.0	110	
1,2-Dichloropropane	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	12.5	125	
1,3-Dichloropropylene	ND< 1.0	ND< 1.0	ND< 1.0	---	31.0	<1.0	37.8	122	
1,1,2,2-Tetrachloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	20.0	<1.0	21.6	108	
1,1,1,2-Tetrachloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Tetrachloroethylene	ND< 1.0	ND< 1.0	ND< 1.0	---	20.0	<1.0	21.6	108	
1,1,1-Trichloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	9.7	97	
1,1,2-Trichloroethane	ND< 1.0	ND< 1.0	ND< 1.0	---	31.0	<1.0	37.8	122	
Trichloroethylene	ND< 1.0	ND< 1.0	ND< 1.0	---	10.0	<1.0	12.0	120	
Trichlorofluoromethane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Trichloropropane	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	
Vinyl chloride	ND< 1.0	ND< 1.0	ND< 1.0	---	---	<1.0	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36675-9  
Field Sample No. DW2-1-ITC  
Date Collected 4-23-86  
Date Received 4-24-86  
Date Analyzed 4-29-86  
QC Report No. 601-28

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	1.0	ND<1.0	---	---	---	
Bis(2-Chloroethoxy)methane	1.0	ND<1.0	---	---	---	
Bis(2-chloroisopropyl)ether	1.0	ND<1.0	---	---	---	
Bromobenzene	1.0	ND<1.0	---	---	---	
Bromodichloromethane	1.0	ND<1.0	---	---	---	
Bromoform	1.0	ND<1.0	---	---	---	
Bromomethane	1.0	ND<1.0	---	---	---	
Carbon tetrachloride	1.0	ND<1.0	---	---	---	
Chloroacetaldehyde	1.0	ND<1.0	---	---	---	
Chloral	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
Chloroethane	1.0	ND<1.0	---	---	---	
Chloroform	1.0	ND<1.0	---	---	---	
1-Chlorohexane	1.0	ND<1.0	---	---	---	
2-Chloroethyl vinyl ether	1.0	ND<1.0	---	---	---	
Chloromethane	1.0	ND<1.0	---	---	---	
Chloromethyl methyl ether	1.0	ND<1.0	---	---	---	
Chlorotoluene	1.0	ND<1.0	---	---	---	
Dibromochloromethane	1.0	ND<1.0	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW2-1-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	1.0	ND<1.0	---	---	---	
Dichlorodifluoromethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethane	1.0	ND<1.0	---	---	---	
1,2-Dichloroethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethylene	1.0	ND<1.0	---	---	---	
trans-1,2-dichloroethylene	1.0	ND<1.0	---	---	---	
Dichloromethane	1.0	ND<1.0	---	---	---	
1,2-Dichloropropane	1.0	ND<1.0	---	---	---	
1,3-Dichloropropylene	1.0	ND<1.0	---	---	---	
1,1,2,3-Tetrachloroethane	1.0	ND<1.0	---	---	---	
1,1,1,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
Tetrachloroethylene	1.0	ND<1.0	---	---	---	
1,1,1-Trichloroethane	1.0	ND<1.0	---	---	---	
1,1,2-Trichloroethane	1.0	ND<1.0	---	---	---	
Trichloroethylene	1.0	ND<1.0	---	---	---	
Trichlorofluoromethane	1.0	ND<1.0	---	---	---	
Trichloropropane	1.0	ND<1.0	---	---	---	
Vinyl chloride	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

Engineering Science  
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ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

ES Job No. 56394

Client

Project AF Plant 42 IRP-II

Client No. \_\_\_\_\_

Laboratory Supervisor Approval:

Lab Sample No. 36675-10

Field Sample No. DW4-2-ITC

Date Collected 4-23-86

Date Received 4-24-86

Date Analyzed 4-29-86

QC Report No. 601-28

Sample Matrix:

/X / Water (ug/L)

/ / Soil

/ / Other

Dilution Factor            N/A

*Moisture	N/A	%
-----------	-----	---

Spike Source
--------------

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	1.0	ND<1.0	---	---	---	
Bis(2-Chloroethoxy)methane	1.0	ND<1.0	---	---	---	
Bis(2-chloroisopropyl)ether	1.0	ND<1.0	---	---	---	
Bromobenzene	1.0	ND<1.0	---	---	---	
Bromodichloromethane	1.0	ND<1.0	---	---	---	
Bromoform	1.0	ND<1.0	---	---	---	
Bromomethane	1.0	ND<1.0	---	---	---	
Carbon tetrachloride	1.0	ND<1.0	---	---	---	
Chloroacetaldehyde	1.0	ND<1.0	---	---	---	
Chloral	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
Chloroethane	1.0	ND<1.0	---	---	---	
Chloroform	1.0	ND<1.0	---	---	---	
1-Chlorohexane	1.0	ND<1.0	---	---	---	
2-Chloroethyl vinyl ether	1.0	ND<1.0	---	---	---	
Chloromethane	1.0	ND<1.0	---	---	---	
Chloromethyl methyl ether	1.0	ND<1.0	---	---	---	
Chlorotoluene	1.0	ND<1.0	---	---	---	
Dibromochloromethane	1.0	ND<1.0	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW4-2-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	1.0	ND<1.0	---	---	---	
Dichlorodifluoromethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethane	1.0	ND<1.0	---	---	---	
1,2-Dichloroethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethylene	1.0	ND<1.0	---	---	---	
trans-1,2-dichloroethylene	1.0	ND<1.0	---	---	---	
Dichloromethane	1.0	ND<1.0	---	---	---	
1,2-Dichloropropane	1.0	ND<1.0	---	---	---	
1,3-Dichloropropylene	1.0	ND<1.0	---	---	---	
1,1,2,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
1,1,1,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
Tetrachloroethylene	1.0	ND<1.0	---	---	---	
1,1,1-Trichloroethane	1.0	ND<1.0	---	---	---	
1,1,2-Trichloroethane	1.0	ND<1.0	---	---	---	
Trichloroethylene	1.0	ND<1.0	---	---	---	
Trichlorofluoromethane	1.0	ND<1.0	---	---	---	
Trichloropropane	1.0	ND<1.0	---	---	---	
Vinyl chloride	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_  
*W. H. H. H.*

Lab Sample No. 36675-11  
Field Sample No. DW4-1-ITC  
Date Collected 4-23-86  
Date Received 4-24-86  
Date Analyzed 4-29-86  
QC Report No. 601-28

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	1.0	ND<1.0	---	---	---	
Bis(2-Chloroethoxy)methane	1.0	ND<1.0	---	---	---	
Bis(2-chloroisopropyl)ether	1.0	ND<1.0	---	---	---	
Bromobenzene	1.0	ND<1.0	---	---	---	
Bromodichloromethane	1.0	ND<1.0	---	---	---	
Bromoform	1.0	ND<1.0	---	---	---	
Bromomethane	1.0	ND<1.0	---	---	---	
Carbon tetrachloride	1.0	ND<1.0	---	---	---	
Chloroacetaldehyde	1.0	ND<1.0	---	---	---	
Chloral	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
Chloroethane	1.0	ND<1.0	---	---	---	
Chloroform	1.0	ND<1.0	---	---	---	
1-Chlorohexane	1.0	ND<1.0	---	---	---	
2-Chloroethyl vinyl ether	1.0	ND<1.0	---	---	---	
Chloromethane	1.0	ND<1.0	---	---	---	
Chloromethyl methyl ether	1.0	ND<1.0	---	---	---	
Chlorotoluene	1.0	ND<1.0	---	---	---	
Dibromochloromethane	1.0	ND<1.0	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Purgeable halocarbons  
EPA Method 601

DW4-1-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	1.0	ND<1.0	---	---	---	
Dichlorodifluoromethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethane	1.0	ND<1.0	---	---	---	
1,2-Dichloroethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethylene	1.0	ND<1.0	---	---	---	
trans-1,2-dichloroethylene	1.0	ND<1.0	---	---	---	
Dichloromethane	1.0	ND<1.0	---	---	---	
1,2-Dichloropropane	1.0	ND<1.0	---	---	---	
1,3-Dichloropropylene	1.0	ND<1.0	---	---	---	
1,1,2,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
1,1,1,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
Tetrachloroethylene	1.0	ND<1.0	---	---	---	
1,1,1-Trichloroethane	1.0	1.6	---	13.4	---	
1,1,2-Trichloroethane	1.0	ND<1.0	---	---	---	
Trichloroethylene	1.0	ND<1.0	---	---	---	
Trichlorofluoromethane	1.0	ND<1.0	---	---	---	
Trichloropropane	1.0	ND<1.0	---	---	---	
Vinyl chloride	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

ES Job No. 56234  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36675-12  
Field Sample No. DW4-2-ITC Duplicate  
Date Collected 4-23-86  
Date Received 4-24-86  
Date Analyzed 4-29-86  
QC Report No. 601-28

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture N/A %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	1.0	ND<1.0	---	---	---	
Bis(2-Chloroethoxy)methane	1.0	ND<1.0	---	---	---	
Bis(2-chloroisopropyl)ether	1.0	ND<1.0	---	---	---	
Bromobenzene	1.0	ND<1.0	---	---	---	
Bromodichloromethane	1.0	ND<1.0	---	---	---	
Bromoform	1.0	ND<1.0	---	---	---	
Bromomethane	1.0	ND<1.0	---	---	---	
Carbon tetrachloride	1.0	ND<1.0	---	---	---	
Chloroacetaldehyde	1.0	ND<1.0	---	---	---	
Chloral	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
Chloroethane	1.0	ND<1.0	---	---	---	
Chloroform	1.0	ND<1.0	---	---	---	
1-Chlorohexane	1.0	ND<1.0	---	---	---	
2-Chloroethyl vinyl ether	1.0	ND<1.0	---	---	---	
Chloromethane	1.0	ND<1.0	---	---	---	
Chloromethyl methyl ether	1.0	ND<1.0	---	---	---	
Chlorotoluene	1.0	ND<1.0	---	---	---	
Dibromochloromethane	1.0	ND<1.0	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW4-2-ITC Duplicate

Compound	Concentration			Retention Time		Notes
	Det. Lim	Column 1	Column 2	Column 1	Column 2	
Dichloroethane	1.0	ND<1.0	---	---	---	
Dichlorodifluoroethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethane	1.0	ND<1.0	---	---	---	
1,2-Dichloroethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethylene	1.0	ND<1.0	---	---	---	
trans-1,2-dichloroethylene	1.0	ND<1.0	---	---	---	
Dichloropropane	1.0	ND<1.0	---	---	---	
1,2-Dichloropropane	1.0	ND<1.0	---	---	---	
1,3-Dichloropropylene	1.0	ND<1.0	---	---	---	
1,1,2,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
1,1,1,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
Tetrachloroethylene	1.0	ND<1.0	---	---	---	
1,1,1,1-Tetrachloroethane	1.0	ND<1.0	---	---	---	
1,1,1,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
Trichloroethylene	1.0	ND<1.0	---	---	---	
Trichlorofluoroethane	1.0	ND<1.0	---	---	---	
Trichloropropane	1.0	ND<1.0	---	---	---	
Vinyl chloride	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

## EPA Method 601

ES JOB NO. 56394

Client

Project AF Plant 42 IRP-II

Client No. \_\_\_\_\_

Laboratory Supervisor Approval:

Sample Matrix:

/x Water (ug/L)

2 / 501

44 Other

### Spike Source

Lab Sample No. 36675-13

Field Sample No. DW4-2-I7C Spike

Date Collected 4-23-86

Date Received 4-24-86

Date Analyzed 4-29-86

QC Report No. 601-28

Dilution Factor                      N/A

*Moisture	N/A	g
-----------	-----	---

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	1.0	ND<1.0	---	---	---	
Bis(2-Chloroethoxy)methane	1.0	ND<1.0	---	---	---	
Bis(2-chloroisopropyl)ether	1.0	ND<1.0	---	---	---	
Bromobenzene	1.0	ND<1.0	---	---	---	
Bromodichloromethane	1.0	11.2	---	14.2	---	
Bromoform	1.0	11.6	---	19.4	---	
Bromomethane	1.0	ND<1.0	---	---	---	
Carbon tetrachloride	1.0	11.9	---	13.7	---	
Chloroacetaldehyde	1.0	ND<1.0	---	---	---	
Chloral	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	10.8	---	24.6	---	
Chloroethane	1.0	ND<1.0	---	---	---	
Chloroform	1.0	11.9	---	---	---	
1-Chlorohexane	1.0	ND<1.0	---	---	---	
2-Chloroethyl vinyl ether	1.0	ND<1.0	---	---	---	
Chloromethane	1.0	ND<1.0	---	---	---	
Chloromethyl methyl ether	1.0	ND<1.0	---	---	---	
Chlorotoluene	1.0	ND<1.0	---	---	---	
Dibromochloromethane	1.0	11.2	---	---	---	

Continued



AD-A198 943

INSTALLATION RESTORATION PROGRAM PHASE 2

7/7

CONFIRMATION/QUANTIFICATION STAG. (U)

ENGINEERING-SCIENCE INC PASADENA CALIF

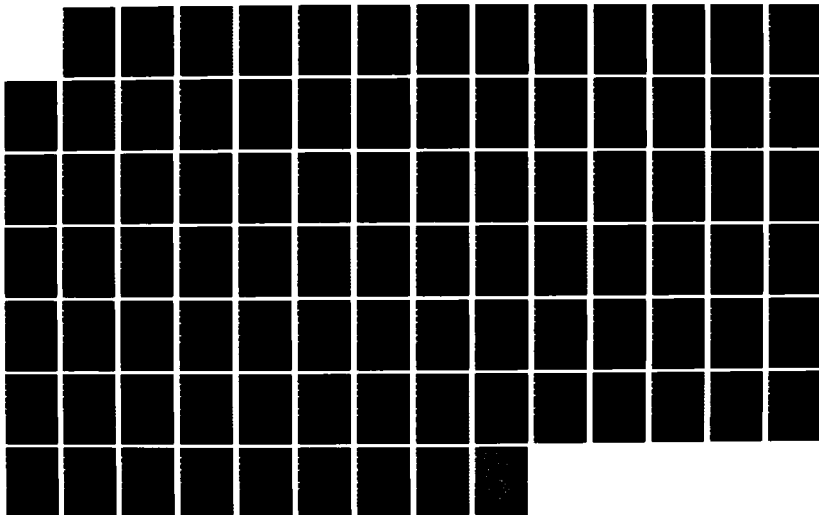
28 FEB 87

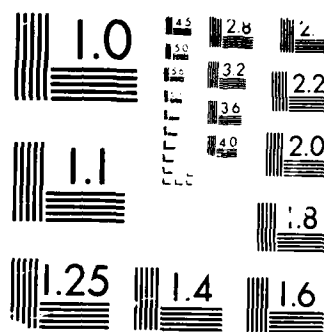
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F/G 24/7

NL





MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A

ANALYTICAL RESULTS SUMMARY  
Purgeable Halocarbons  
EPA Method 601

DW4-2-ITC Spike

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	1.0	ND<1.0	---	---	---	
Dichlorodifluoromethane	1.0	ND<1.0	---	---	---	
1,1-Dichloroethane	1.0	11.6	---	10.3	---	
1,2-Dichloroethane	1.0	11.2	---	12.2	---	
1,1-Dichloroethylene	1.0	14.4	---	9.1	---	
trans-1,2-dichloroethylene	1.0	10.7	---	11.0	---	
Dichloromethane	1.0	11.0	---	6.5	---	
1,2-Dichloropropane	1.0	12.5	---	15.5	---	
1,3-Dichloropropylene	1.0	37.8	---	15.8	---	
1,1,2,2-Tetrachloroethane	1.0	21.6	---	21.8	---	
1,1,1,2-Tetrachloroethane	1.0	ND<1.0	---	---	---	
Tetrachloroethylene	1.0	21.6	---	21.8	---	
1,1,1-Trichloroethane	1.0	9.7	---	13.4	---	
1,1,2-Trichloroethane	1.0	37.8	---	16.9	---	
Trichloroethylene	1.0	12.0	---	16.3	---	
Trichlorofluoromethane	1.0	ND<1.0	---	---	---	
Trichloropropane	1.0	ND<1.0	---	---	---	
Vinyl chloride	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36675-7  
Field Sample No. DW4-2-ITC  
Date Collected 4-23-86  
Date Received 4-24-86  
Date Analyzed 4-30-86  
QC Report No. 602-20

Sample Matrix:

☒ Water (ug/L)

☐ Soil

☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
1,2-Dichlorobenzene	1.0	ND<1.0	---	---	---	
1,3-Dichlorobenzene	1.0	ND<1.0	---	---	---	
1,4-Dichlorobenzene	1.0	ND<1.0	---	---	---	
Ethyl benzene	1.0	ND<1.0	---	---	---	
Toluene	1.0	ND<1.0	---	---	---	
Xylenes (Dimethyl benzene)	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36675-8  
Field Sample No. DW4-1-ITC  
Date Collected 4-23-86  
Date Received 4-24-86  
Date Analyzed 4-30-86  
QC Report No. 602-20

Sample Matrix:

☒ / Water (ug/L)

☐ / Soil

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
1,2-Dichlorobenzene	1.0	ND<1.0	---	---	---	
1,3-Dichlorobenzene	1.0	ND<1.0	---	---	---	
1,4-Dichlorobenzene	1.0	ND<1.0	---	---	---	
Ethyl benzene	1.0	ND<1.0	---	---	---	
Toluene	1.0	ND<1.0	---	---	---	
Xylenes (Dimethyl benzene)	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Purgeable Aromatics  
EPA Method 602

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36675-10  
Field Sample No. DW2-1-ITC  
Date Collected 4-23-86  
Date Received 4-24-86  
Date Analyzed 4-30-86  
QC Report No. 602-20

Sample Matrix:

☒ Water (ug/L)  
☐ Soil  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	1.0	ND<1.0	---	---	---	
Chlorobenzene	1.0	ND<1.0	---	---	---	
1,2-Dichlorobenzene	1.0	ND<1.0	---	---	---	
1,3-Dichlorobenzene	1.0	ND<1.0	---	---	---	
1,4-Dichlorobenzene	1.0	ND<1.0	---	---	---	
Ethyl benzene	1.0	ND<1.0	---	---	---	
Toluene	1.0	ND<1.0	---	---	---	
Xylenes (Dimethyl benzene)	1.0	ND<1.0	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES

1700 Peachtree Industrial Blvd., Suite 500, Atlanta, GA 30329 • 404/525-9200

### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park So.  
Suite 590  
Atlanta, GA 30329-2213

October 13, 1986

Attn: M.A. Guthrie

Page 1 of 2

April 28, 1986

56394MAG

36699/rjc

#### REVISED REPORT

Eleven (11) soil samples.

<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
21-FDA7-SB1-SS3-5-ITC	04-24-86	0900
21-FDA7-SB1-SS8-20-ITC	04-24-86	0900
21-FDA7-SB2-SS4-7.5-ITC	04-24-86	1000
21-FDA7-SB2-SS8-20-ITC	04-24-86	1000
21-FDA7-SB3-SS3-5-ITC	04-24-86	1100
21-FDA7-SB3-SS8-20-ITC	04-24-86	1100
8-FTA8-SB1-SS3-5-ITC	04-25-86	0815
8-FTA8-SB1-SS8-20-ITC	04-25-86	0815
17-NFTC-SB3-SS1-3-ITC	04-25-86	1000
17-NFTC-SB3-SS15-3-ITC	04-25-86	1000
1-FCO2-SB10-SS1-3-ITC	04-25-86	1500

The samples were analyzed for Total Petroleum Hydrocarbons (TPH) by infrared spectroscopy technique (EPA Method 418.1, Extraction Method 3550). The results are listed on the following page.

David S. Tripp  
Chemist

Eric W. Lindsay  
Laboratory Manager I

Engineering Science  
M.A. Guthrie

October 13, 1986  
JN: 36699 - Page 2

SAMPLE: ES Job No. 56394, AF Plant 42 IRP-II  
DATE OF ANALYSIS: 5-6-86

<u>Sample Identification</u>	<u>Total Petroleum Hydrocarbons (ug/g)</u>
17-NFTC-SB3-SS1-3-ITC	3
21-FDA7-SB3-SS8-20-ITC	ND<2
21-FDA7-SB3-SS3-5-ITC	ND<2
21-FDA7-SB2-SS8-20-ITC	ND<2
21-FDA7-SB1-SS8-20-ITC	ND<2
21-FDA7-SB1-SS3-5-ITC	ND<2
21-FDA7-SB2-SS4-7.5-ITC	ND<2
17-NFTC-SB3-SS15-3-ITC	ND<2
8-FTA8-SB1-SS3-5-ITC	ND<2
8-FTA8-SB1-SS8-20-ITC	ND<2
1-FCD2-SB10-SS1-3-ITC	ND<2
21-FDA7-SB2-SS4-7.5-ITC Duplicate	ND<2
21-FDA7-SB2-SS4-7.5-ITC Spike	18
Spike Concentration	20

Relative Percent Difference - N/A

Percent Recovery - 90.0%

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.





## CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park, So., Suite 590  
Atlanta, GA 30329-2213

Date October 9, 1986

Attn: Mark Guthrie

Page 1 of 46

April 30, 1986

56394

36732/rjc

REVISED REPORT

Eighteen (18) soil samples.

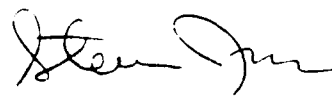
<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
19-ERA3-SB1-SS5-10-ITC	4-25-86	1400
19-ERA3-SB2-SS5-10-ITC	4-25-86	1430
10-PWN2-SB1-SS1-3-ITC	4-28-86	1100
10-PWN2-SB2-SS1-3-ITC	4-28-86	1115
10-PWN2-SB3-SS1-3-ITC	4-28-86	1130
10-PWN2-SB4-SS1-3-ITC	4-28-86	1145
10-PWN2-SB4-SS15-3-ITC	4-28-86	1145
12-ERA1-SB1-SS4-7.5-ITC	4-28-86	0900
12-ERA1-SB1-SS8-20-ITC	4-28-86	0900
12-ERA1-SB2-SS3-5-ITC	4-28-86	1000
12-ERA1-SB2-SS8-20-ITC	4-28-86	1000
13-DAB2-SB1-SS1-3-ITC	4-28-86	1200
13-DAB2-SB2-SS1-3-ITC	4-28-86	1215
13-DAB2-SB3-SS1-3-ITC	4-28-86	1230
13-DAB2-SB4-SS1-3-ITC	4-28-86	1245
5-AFTC-SB3-SS1-3-ITC	4-29-86	1200
5-AFTC-SB3-SS15-3-ITC	4-29-86	1200
6-OFTC-SB2-SS1-3-ITC	4-29-86	1230

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.



William P. Fassinger  
Chemist



Richard L. Merrell  
Laboratory Director

The samples were also extracted according to CAM Title 22:66700; and analyzed by Atomic Absorption Spectroscopy and Inductively Coupled Plasma. The phenolics were distilled and analyzed according to standard methods 510A/510C. The results are listed on the following pages.

Samples 5-AFTC-SB3-SS1-3-ITC, 5-AFTC-SB3-SS15-3-ITC, and 6-OFTC-SB2-SS1-3-ITC were extracted according to SW Method 8080 and split into two fractions. One fraction was cleaned several times with mercury and sulfuric acid and analyzed for PCB's. The second fraction was analyzed for organochlorine pesticides. Both fractions were analyzed by direct injection into a Varian 3700 gas chromatograph equipped with an electron capture detector. The results are listed on the following summary sheets.

Also the samples were analyzed for Oil and Grease by infrared spectroscopy technique (EPA procedure 413.2). The results are listed in Table I.

Table I

SAMPLE: ES Job No. 56394, AF Plant 42 IRP-II  
DATE OF ANALYSIS: 5-22-86

<u>Sample Identification</u>	<u>Total Oil and Grease (ug/g)</u>
13-DAB2-SB1-SS1-3-ITC	3
13-DAB2-SB2-SS1-3-ITC	ND<2
13-DAB2-SB3-SS1-3-ITC	ND<2
13-DAB2-SB4-SS1-3-ITC	ND<2
12-ERA1-SB1-SS4-7.5-ITC	ND<2
12-ERA1-SB1-SS8-20-ITC	ND<2
12-ERA1-SB2-SS8-20-ITC	ND<2
12-ERA1-SB2-SS3-5-ITC	8
19-EPA3-SB2-SS5-10-ITC	ND<2
19-EPA3-SB1-SS5-10-ITC	ND<2
10-PWN2-SB1-SS1-3-ITC	ND<2
10-PWN2-SB2-SS1-3-ITC	ND<2
10-PWN2-SB3-SS1-3-ITC	13
10-PWN2-SB4-SS15-3-ITC	ND<2
10-PWN2-SB4-SS1-3-ITC	ND<2
10-PWN2-SB3-SS1-3-ITC Duplicate	5
10-PWN2-SB3-SS1-3-ITC Spike	30
Spike Concentration	20

Relative Percent Difference - 89%

Percent Recovery -105%

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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QC Report No. 66700-10  
Laboratory Supervisor Approval: \_\_\_\_\_

Dilution Factor 10  
★ Moisture

ES Job No. 56394

# Client

Project No. \_\_\_\_\_  
Client No. \_\_\_\_\_

Date Collected 4-29-86

Date Received 4-30-86

**Sample Matrix:**

// Water (ug/L)

 $\text{mg}/\text{X} / \text{Soil} (\text{mg}/\text{m}^2)$ 

/ / Other

Field Sample No.	Lab Sample No.	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
6-OFIC-SB2-SS1-3-IIC	1	ND<0.03	5.2	ND<0.03	ND<0.06	ND<0.2	0.016	ND< 0.005	0.1
5-AFIC-SB3-SS1-3-IIC	2	0.038	3.7	ND<0.03	ND<0.06	ND<0.2	0.014	ND< 0.005	0.1
5-AFIC-SB3-SS15-3-IIC	3	0.044	4.0	ND<0.03	ND<0.06	ND<0.2	0.001	ND< 0.005	ND<0.03
5-AFIC-SB3-SS15-3-IIC	4D	0.059	3.8	ND<0.03	ND<0.06	ND<0.2	0.003	ND< 0.005	ND<0.03
5-AFIC-SB3-SS15-3-IIC	5S	0.52	8.4	4.8	4.9	4.6	1.08	0.41	0.88
Date Analyzed	M D	5/16	5/15	5/15	5/15	5/15	5/19	5/12	5/15
Analytical Method	**	G	P	P	P	P	C	G	P

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.



**Sample Matrix:**

// Water (ug/L)

Soil (ug/ml)

Other

Spike Source(s)

Dilution Factor

**\*Moisture**

QC Report No. 66700-11

Laboratory Supervisor Approval:

[illegible]

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

★ Moisture

Field Sample No.	Lab Sample No.	Phenolics
10PWN2-SB1-SS1- 3-ITC		0.12
10-PWN2-SR2-SS1- 3-ITC		0.19
10-PWN2-SR3-SS1- 3-ITC		0.13
10-PWN2-SB4-SS1- 3-ITC		0.18
10-PWN2-SB4-SS15- 3-ITC		0.10
Duplicate		0.14
Spike		1.54
Date Analyzed	M D 5/5	
Analytical Method	**	420.1

\* - If % moisture is reported, results \*\* are presented on a dry-weight basis.

GC PESTICIDE ANALYSIS

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Method Blank  
SAMPLE IDENTIFICATION: 36732 - MB0512P2

DATE ANALYZED: 5-17-86

UNITS: Micrograms/kilogram (ppb)

PESTICIDES-(PP's)

alpha-BHC	ND<1
beta-BHC	ND<1
delta-BHC	ND<1
gamma-BHC (Lindane)	ND<1
Heptachlor	ND<1
Aldrin	ND<1
Heptachlor Epoxide	ND<1
Endosulfan I	ND<1
Dieldrin	ND<2
4,4'-DDE	ND<2
Endrin	ND<2
Endosulfan II	ND<2
4,4'-DDD	ND<2
Endrin Aldenhyde	ND<2
Endosulfan Sulfate	ND<2
4,4'-DDT	ND<2
Methoxychlor	ND<10
Endrin Ketone	ND<2
Chlordane	ND<10
Toxaphene	ND<20
PCB-1016	ND<10
PCB-1221	ND<10
PCB-1232	ND<10
PCB-1242	ND<10
PCB-1248	ND<10
PCB-1254	ND<20
PCB-1260	ND<20

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

TR - Trace, this compound was present, but was below the level at which concentration could be determined.



GC PESTICIDE ANALYSIS

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SAMPLE IDENTIFICATION: 36732 - 5-AFTC-SB3-SS1-3-ITCDATE ANALYZED: 5-21-86UNITS: Micrograms/kilogram (ppb)PESTICIDES-(PP's)

alpha-BHC	ND<1
beta-BHC	ND<1
delta-BHC	ND<1
gamma-BHC (Lindane)	ND<1
Heptachlor	ND<1
Aldrin	ND<1
Heptachlor Epoxide	ND<1
Endosulfan I	ND<1
Dieldrin	ND<2
4,4'-DDE	ND<2
Endrin	ND<2
Endosulfan II	ND<2
4,4'-DDD	ND<2
Endrin Aldehyde	ND<2
Endosulfan Sulfate	ND<2
4,4'-DDT	ND<2
Methoxychlor	ND<10
Endrin Ketone	ND<2
Chlordane	ND<10
Toxaphene	ND<20
PCB-1016	ND<10
PCB-1221	ND<10
PCB-1232	ND<10
PCB-1242	ND<10
PCB-1248	ND<10
PCB-1254	ND<20
PCB-1260	ND<20

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

TR - Trace, this compound was present, but was below the level at which concentration could be determined.

GC PESTICIDE ANALYSIS

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SAMPLE IDENTIFICATION: 36732 - 5-AFTC-SB3-SS15-3-ITCDATE ANALYZED: 5-21-86UNITS: Micrograms/kilogram (ppb)PESTICIDES-(PP's)

alpha-BHC	ND<4
beta-BHC	ND<4
delta-BHC	ND<4
gamma-BHC (Lindane)	ND<4
Heptachlor	ND<4
Aldrin	ND<4
Heptachlor Epoxide	ND<4
Endosulfan I	ND<4
Dieldrin	ND<8
4,4'-DDE	ND<8
Endrin	ND<8
Endosulfan II	ND<8
4,4'-DDD	ND<8
Endrin Aldehyde	ND<8
Endosulfan Sulfate	ND<8
4,4'-DDT	ND<8
Methoxychlor	ND<40
Endrin Ketone	ND<8
Chlordane	ND<40
Toxaphene	ND<80
PCB-1016	ND<10
PCB-1221	ND<10
PCB-1232	ND<10
PCB-1242	ND<10
PCB-1248	ND<10
PCB-1254	ND<20
PCB-1260	TR<20

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

TR - Trace, this compound was present, but was below the level at which concentration could be determined.

GC PESTICIDE ANALYSIS

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SAMPLE IDENTIFICATION: 36732 - 6-OFTC-SB2-SS1-3-ITCDATE ANALYZED: 5-17-86UNITS: Micrograms/kilogram (ppb)PESTICIDES-(PP's)

alpha-BHC	ND<10
beta-BHC	ND<10
delta-BHC	ND<10
gamma-BHC (Lindane)	ND<10
Heptachlor	ND<10
Aldrin	ND<10
Heptachlor Epoxide	ND<10
Endosulfan I	ND<10
Dieldrin	ND<20
4,4'-DDE	ND<20
Endrin	ND<20
Endosulfan II	ND<20
4,4'-DDD	ND<20
Endrin Aldehyde	ND<20
Endosulfan Sulfate	ND<20
4,4'-DDT	ND<20
Methoxychlor	ND<100
Endrin Ketone	ND<20
Chlordane	ND<100
Toxaphene	ND<200
PCB-1016	ND<50
PCB-1221	ND<50
PCB-1232	ND<50
PCB-1242	ND<50
PCB-1248	320
PCB-1254	ND<100
PCB-1260	ND<100

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

TR - Trace, this compound was present, but was below the level at which concentration could be determined.

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 10-PW<sup>N</sup>2-SB4-SS1-3-ITC

Duplicates 36732-16, 36732-20

Spike 36732-21

QC Report No. 8010-29

Date Analyzed 5-6-86

Laboratory Supervisor Approval:

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

\*Moisture %

Spike Source

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroethoxy)methane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bis(2-Chloroisopropyl)ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Bromodichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.049	98	
Bromoform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.054	108	
Bromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Carbon tetrachloride	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.045	90	
Chloroacetaldehyde	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloral	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.052	104	
Chloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloroform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	<0.010	0.050	100	
1-Chlorohexane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
2-Chloroethyl vinyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chloromethyl methyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Chlorotoluene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	<0.010	---	---	
Dibromochloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	<0.010	0.160	103	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB4-SS13-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.052	104	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.050	100	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.070	140	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.050	100	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.080	160	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.050	100	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	ND< 0.010	0.160	103	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	ND< 0.010	0.095	95	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	ND< 0.010	0.095	95	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.036	76	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	ND< 0.010	0.160	103	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.051	102	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-11  
Field Sample No. 13-DAB2-SB4-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

13-DAB2-SB4-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-12  
Field Sample No. 13-DAB2-SB3-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

13-DAB2-SB3-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.068	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Perchloroethylene	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval:

Lab Sample No. 36732-13  
Field Sample No. 13-DAB2-SB2-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

\_\_\_/ Water (ug/L)

/X/ Soil (ug/g)

   / Other

Dilution Factor                      N/A

\*Moisture 9

## Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
Sw Method 8010

13-DAB2-SB2-SS1-3-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.037	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36732-14  
Field Sample No. 13-DAB2-SB1-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

13-DAB2-SB1-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.013	---	13.4	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-15  
Field Sample No. 10-PwN2-SB4-SS15-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB4-SS15-3-JTC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.039	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36732-16  
Field Sample No. 10-PWN2-SB4-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ / Water (ug/l)  
☒ / Soil (ug/g)  
☐ / Other

Dilution Factor N/A  
\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB4-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-17  
Field Sample No. 10-PWN2-SB3-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl) ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chloroiodide	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB3-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-18  
Field Sample No. 10-PWN2-SB2-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB2-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.018	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-19  
Field Sample No. 10-PWN2-SB1-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ Water (ug/l)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chloronhexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB1-SS1-3-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.075	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-20 Duplicate  
Field Sample No. 10-PWN2-SB4-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB4-SS1-3-ITC Duplicate

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloropropane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36732-21 Spike                                   
Field Sample No. 10-PWN2-SB4-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-6-86  
QC Report No. 8010-29

Sample Matrix:

☐ water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                 

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.049	---	14.2	---	
Bromoform	0.010	0.054	---	19.5	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.045	---	13.8	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.052	---	24.3	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.050	---	11.5	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.160	---	17.0	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

10-PWN2-SB4-SS1-3-ITC Spike

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.052	---	10.3	---	
1,2-Dichloroethane	0.010	0.050	---	12.2	---	
1,1-Dichloroethylene	0.010	0.070	---	9.2	---	
trans-1,2-dichloroethylene	0.010	0.050	---	11.1	---	
Dichloromethane	0.010	0.060	---	6.6	---	
1,2-Dichloropropane	0.010	0.050	---	15.6	---	
1,3-Dichloropropylene	0.010	0.160	---	17.0	---	
1,1,2,2-Tetrachloroethane	0.010	0.095	---	21.9	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.095	---	21.9	---	
1,1,1-Trichloroethane	0.010	0.038	---	13.4	---	
1,1,2-Trichloroethane	0.010	0.160	---	17.0	---	
Trichloroethylene	0.010	0.051	---	16.4	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 10-PWN2-SB1-SS1-3-ITC

Duplicates 36732-11, 36732-15

Spike 36732-16

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

QC Report No. 8020-24

Date Analyzed 5-15-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Spike Source 10 ppb 602 standard

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RFD	S4	SR	SSR	PF	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	<0.005	0.038	76	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.041	77	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.040	74	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.041	73	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.040	75	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.041	76	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.058	<0.005	0.042	72	
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.005	ND< 0.005	---	---	<0.005	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36732-6  
Field Sample No. 13-DAB2-SB1-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other

Dilution Factor N/A  
\*Moisture  %

Sample Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36732-7  
Field Sample No. 10-PWN2-SB3-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-8  
Field Sample No. 10-PWN2-SB4-SS15-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-9  
Field Sample No. 10-PWN2-SB4-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-10  
Field Sample No. 10-PWN2-SB2-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36732-11  
Field Sample No. 10-PWN2-SB1-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36732-12  
Field Sample No. 13-DAB2-SB2-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other

Dilution Factor N/A  
\*Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36732-13  
Field Sample No. 13-DAB2-SB3-SS1-3-170  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_

Spoke Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36732-14  
Field Sample No. 13-DAB2-SB4-SS1-3-170  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36732-15 Duplicate  
Field Sample No. 10-PWN2-SB1-SS1-3-ITC  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client   
Project AF Plant 42 IRP-II  
Client No.   
Laboratory Supervisor Approval:

Lab Sample No. 36732-16 Spike  
Field Sample No. 10-PW12-SB1-SS1-3-170  
Date Collected 4-28-86  
Date Received 4-30-86  
Date Analyzed 5-15-86  
QC Report No. 8020-24

Sample Matrix:

Water (ug/l)  
☒ Soil (ug/g)  
 Other

Dilution Factor N/A  
\*Moisture

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.038	---	2.5	---	
Chlorobenzene	0.005	0.041	---	7.8	---	
1,2-Dichlorobenzene	0.005	0.040	---	14.3	---	
1,3-Dichlorobenzene	0.005	0.041	---	12.8	---	
1,4-Dichlorobenzene	0.005	0.040	---	12.6	---	
Ethyl benzene	0.005	0.041	---	7.3	---	
Toluene	0.005	0.042	---	4.7	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYTICAL SERVICES



### CERTIFICATE OF ANALYSIS

Engineering Science  
57 Executive Park So., Suite 590  
Atlanta, GA 30329-2213

October 9, 1986

Attn: Mark Guthrie

Page 1 of 35

May 1, 1986

56394

36762/rjc

#### REVISED REPORT

Eight (8) soil samples.

<u>Sample Identification</u>	<u>Date</u>	<u>Time</u>
3-ERA7-SB1-SS3-5-ITC	4-29-86	0800
3-ERA7-SB1-SS8-20-ITC	4-29-86	0800
3-ERA7-SB2-SS4-7.5-ITC	4-29-86	0915
3-ERA7-SB2-SS8-20-ITC	4-29-86	0915
3-ERA7-SB3-SS3-5-ITC	4-29-86	1030
3-ERA7-SB3-SS8-20-ITC	4-29-86	1030
3-ERA7-SB4-SS3-5-ITC	4-29-86	1130
3-ERA7-SB4-SB8-20-ITC	4-29-86	1130

The samples were analyzed for purgeable halocarbons using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a Hall electrolytic conductivity detector. The samples were prepared according to EPA Method 8010.

The samples were also analyzed for Aromatic volatile organic compounds using a Tekmar liquid sample concentrator and a Varian 6000 gas chromatograph equipped with a photoionization detector. The samples were prepared according to EPA Method 8020. The results are listed on the following summary sheets.

The samples were analyzed for total petroleum hydrocarbons (TPH) by infrared spectroscopy technique (EPA procedure 418.1). The results are listed in Table I.

William P. Fassinger  
Chemist

Eric W. Lindsay  
Laboratory Manager

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Table I

SAMPLE: ES Job No.: 56394, AF Plant 42  
DATE OF ANALYSES: 5/22/86

<u>Sample Identification</u>	<u>Total Oil and Grease (ug/g)</u>
3-ERA7-SB1-SS3-5-ITC	ND<2
3-ERA7-SB2-SS4-7.5-ITC	ND<2
3-ERA7-SB3-SS3-5-ITC	ND<2
3-ERA7-SB1-SS8-20-ITC	ND<2
3-ERA7-SB4-SS3-5-ITC	45
3-ERA7-SB3-SS8-20-ITC	ND<2
3-ERA7-SB4-SS6-20-ITC	ND<2
3-ERA7-SB2-SS8-20-ITC	ND<2
3-ERA7-SB2-SS8-20-ITC Duplicate	ND<2
3-ERA7-SB2-SS8-20-ITC Spike	24
Spike Concentration	20

Relative Percent Difference - N/A

Percent Recovery - 120%

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

Lab Sample Nos. 3-ERA7-SB4-SS3-C-ITC

Duplicates 36762-12, 36762-13

Spike 36762-14

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other

Spike Source

QC Report No. 8010-30

Date Analyzed 5-7-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture %

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Bis(2-Chloroethoxy)methane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Bis(2-Chloroisopropyl)ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Bromobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Bromodichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.051	102	
Bromoform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.050	100	
Bromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Carbon tetrachloride	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.051	102	
Chloroacetaldehyde	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Chloral	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Chlorobenzene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.047	94	
Chloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Chloroform	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.051	102	
1-Chlorohexane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
2-Chloroethyl vinyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Chloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Chloromethyl methyl ether	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Chlorotoluene	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Dibromochloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	ND< 0.010	0.150	97	

continued on next page

QUALITY CONTROL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB4-SS3-5-ITC

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Dibromomethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Dichlorodifluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
1,1-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.049	98	
1,2-Dichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.048	96	
1,1-Dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.045	90	
trans-1,2-dichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.049	98	
Dichloromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.055	110	
1,2-Dichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.048	96	
1,3-Dichloropropylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.045	ND< 0.010	0.045	100	
1,1,2,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	ND< 0.010	0.089	89	
1,1,1,2-Tetrachloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Tetrachloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.100	ND< 0.010	0.089	89	
1,1,1-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.070	140	
1,1,2-Trichloroethane	ND< 0.010	ND< 0.010	ND< 0.010	---	0.155	ND< 0.010	0.150	97	
Trichloroethylene	ND< 0.010	ND< 0.010	ND< 0.010	---	0.050	ND< 0.010	0.048	96	
Trichlorofluoromethane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Trichloropropane	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	
Vinyl chloride	ND< 0.010	ND< 0.010	ND< 0.010	---	---	ND< 0.010	---	---	

\* - If % moisture is reported, results are presented on a dry-weight basis.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-5  
Field Sample No. 3-ERA7-SB1-SS3-5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-3C

Sample Matrix:   

   / Water (ug/L)

/X / Soil (ug/g)

   / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB1-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.030	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-6  
Field Sample No.\* 3-ERA7-SB1-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

\* - Sample bottle I.D.



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

\*3-ERA7-SB1-SS6-20-170

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

\* - Sample bottle I.D.

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-7  
Field Sample No. 3-ERA7-SB2-SS4-7.5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB2-SS4-7.5-17C

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-8  
Field Sample No. 3-ERA7-SB2-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ Water (ug/t)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB2-SS8-20-1

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Bromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-9  
Field Sample No. 3-ERA7-SB3-SS3-5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB3-SS3-5-111

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-10  
Field Sample No. 3-ERA7-SB3-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB3-SS8-20-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36762-11  
Field Sample No. 3-ERA7-SB4-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB4-SS6-20-111

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	0.078	---	13.5	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-12  
Field Sample No. 3-ERA7-SB4-SS3-5-17C  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB4-SS3-5-ITC

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client                                   
Project AF Plant 42 IRP-II  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36762-13 Duplicate  
Field Sample No. 3-ERA7-SB4-SS3-5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	ND<0.010	---	---	---	
Bromoform	0.010	ND<0.010	---	---	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	ND<0.010	---	---	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	ND<0.010	---	---	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	ND<0.010	---	---	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	ND<0.010	---	---	---	

Continued

ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB4-SS3-5-ITC Duplicate

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dibromomethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	ND<0.010	---	---	---	
1,2-Dichloroethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethylene	0.010	ND<0.010	---	---	---	
trans-1,2-dichloroethylene	0.010	ND<0.010	---	---	---	
Dichloromethane	0.010	ND<0.010	---	---	---	
1,2-Dichloropropane	0.010	ND<0.010	---	---	---	
1,3-Dichloropropylene	0.010	ND<0.010	---	---	---	
1,1,2,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	ND<0.010	---	---	---	
1,1,1-Trichloroethane	0.010	ND<0.010	---	---	---	
1,1,2-Trichloroethane	0.010	ND<0.010	---	---	---	
Trichloroethylene	0.010	ND<0.010	---	---	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

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ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42 IRP-II  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-14 Spike  
Field Sample No. 3-ERA7-SB4-SS3-5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-7-86  
QC Report No. 8010-30

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzyl chloride	0.010	ND<0.010	---	---	---	
Bis(2-Chloroethoxy)methane	0.010	ND<0.010	---	---	---	
Bis(2-chloroisopropyl)ether	0.010	ND<0.010	---	---	---	
Bromobenzene	0.010	ND<0.010	---	---	---	
Bromodichloromethane	0.010	0.051	---	14.3	---	
Bromoform	0.010	0.050	---	19.5	---	
Bromomethane	0.010	ND<0.010	---	---	---	
Carbon tetrachloride	0.010	0.051	---	13.8	---	
Chloroacetaldehyde	0.010	ND<0.010	---	---	---	
Chloral	0.010	ND<0.010	---	---	---	
Chlorobenzene	0.010	0.047	---	24.3	---	
Chloroethane	0.010	ND<0.010	---	---	---	
Chloroform	0.010	0.051	---	11.5	---	
1-Chlorohexane	0.010	ND<0.010	---	---	---	
2-Chloroethyl vinyl ether	0.010	ND<0.010	---	---	---	
Chloromethane	0.010	ND<0.010	---	---	---	
Chloromethyl methyl ether	0.010	ND<0.010	---	---	---	
Chlorotoluene	0.010	ND<0.010	---	---	---	
Dibromochloromethane	0.010	0.150	---	17.0	---	

Continued



ANALYTICAL RESULTS SUMMARY  
Halogenated Volatile Organics  
SW Method 8010

3-ERA7-SB4-SS3-5-ITC Spiked

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Dichloromethane	0.010	ND<0.010	---	---	---	
Dichlorodifluoromethane	0.010	ND<0.010	---	---	---	
1,1-Dichloroethane	0.010	0.049	---	10.4	---	
1,2-Dichloroethane	0.010	0.048	---	12.3	---	
1,1-Dichloroethylene	0.010	0.045	---	9.3	---	
trans-1,2-dichloroethylene	0.010	0.049	---	11.1	---	
Dichloropropane	0.010	0.055	---	6.6	---	
1,2-Dichloropropane	0.010	0.048	---	15.6	---	
1,3-Dichloropropylene	0.010	0.150	---	15.9	---	
1,1,2,2-Tetrachloroethane	0.010	0.089	---	21.6	---	
1,1,1,2-Tetrachloroethane	0.010	ND<0.010	---	---	---	
Tetrachloroethylene	0.010	0.089	---	21.6	---	
1,1,1-Trichloroethane	0.010	0.070	---	13.5	---	
1,1,2-Trichloroethane	0.010	0.150	---	17.0	---	
Trichloroethylene	0.010	0.048	---	16.4	---	
Trichlorofluoromethane	0.010	ND<0.010	---	---	---	
Trichloropropane	0.010	ND<0.010	---	---	---	
Vinyl chloride	0.010	ND<0.010	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

QUALITY CONTROL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

Lab Sample Nos. 3-ERA7-SB4-SS6-20-ITC

Duplicates 36762-9, 36762-10

Spike 36762-12

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/Kg)

☐ Other

Spike Source

QC Report No. 8020-25

Date Analyzed 5-16-86

Laboratory Supervisor Approval:

Dilution Factor N/A

\*Moisture

Compound	Blank	Duplicates			Spike Recovery				Notes
		C1	C2	RPD	SA	SR	SSR	PR	
Benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.050	<0.005	0.034	68	
Chlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.032	60	
1,2-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.031	57	
1,3-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.056	<0.005	0.031	55	
1,4-Dichlorobenzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.053	<0.005	0.029	55	
Ethyl benzene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.054	<0.005	0.033	61	
Toluene	ND< 0.005	ND< 0.005	ND< 0.005	---	0.058	0.005	0.035	57	2
Xylenes (Dimethyl benzene)	ND< 0.005	ND< 0.020	ND< 0.005	---	---	0.020	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-12  
Field Sample No. 3-ERA7-SB1-SS3-5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-15-86  
QC Report No. 8020-25

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
Moisture \_\_\_\_\_

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	0.020	---	7.8*	---	
				8.0*		
				8.6*		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

\* - Retention times for the 3 xylene isomers.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lap Sample No. 36762-19  
Field Sample No. 3-ERA7-SB1-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-15-86  
QC Report No. 8020-25

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
xylene (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36762-20  
Field Sample No. 3-ERA7-SB2-SS4-7.5-17C  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-15-86  
QC Report No. 8020-25

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other                                 

Dilution Factor N/A

\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-21  
Field Sample No. 3-ERA7-SB2-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-15-86  
QC Report No. 8020-25

Sample Matrix:

☐ / Water (ug/L)

☒ / Soil (ug/g)

☐ / Other \_\_\_\_\_

Dilution Factor N/A  
Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	0.013	---	7.8*	---	
				8.0*		
				8.6*		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

\* - Retention times for the 3 xylene isomers.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394

Client

Project AF Plant 42

Client No.

Laboratory Supervisor Approval:

Lab Sample No. 36762-6

Field Sample No. 3-ERA7-SB3-SS3-5-ITC

Date Collected 4-29-86

Date Received 5-1-86

Date Analyzed 5-16-86

QC Report No. 8020-25

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other

Dilution Factor N/A

Moisture  %

Spike Source

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	0.005	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	0.006	---	7.8*	---	
				8.0*		
				8.6*		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

\* - Retention times for the 3 xylene isomers.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 55394  
Client                                   
Project AF Plant 42  
Client No.                                   
Laboratory Supervisor Approval:                                 

Lab Sample No. 36762-7  
Field Sample No. 3-ERA7-SB3-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 4-30-86  
Date Analyzed 5-16-86  
QC Report No. 8020-25

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other                                 

Dilution Factor N/A  
\*Moisture                                  %

Spike Source                                 

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	0.005	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.



ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-8  
Field Sample No. 3-ERA7-SB4-SS3-5-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-16-86  
QC Report No. 8020-25

Sample Matrix:

☐ / Water (ug/L)  
☒ / Soil (ug/g)  
☐ / Other \_\_\_\_\_

Dilution Factor N/A  
Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	0.005	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	0.026	---	7.8*	---	
				8.0*		
				8.7*		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

\* - Retention times for the 3 xylene isomers.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-9  
Field Sample No. 3-ERA7-SB4-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-16-86  
QC Report No. 8020-25

Sample Matrix:

☐ Water (ug/L)  
☒ Soil (ug/g)  
☐ Other \_\_\_\_\_

Dilution Factor N/A  
Moisture \_\_\_\_\_%

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	0.005	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	0.020	---	7.8*	---	
				8.0*		
				8.7*		

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

\* - Retention times for the 3 xylene isomers.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client \_\_\_\_\_  
Project AF Plant 42  
Client No. \_\_\_\_\_  
Laboratory Supervisor Approval: \_\_\_\_\_

Lab Sample No. 36762-10 Duplicate  
Field Sample No. 3-ERA7-SB4-SS8-20-ITC  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-16-86  
QC Report No. 8020-25

Sample Matrix:

☐ Water (ug/L)

☒ Soil (ug/g)

☐ Other \_\_\_\_\_

Dilution Factor N/A

\*Moisture \_\_\_\_\_ %

Spike Source \_\_\_\_\_

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	ND<0.005	---	---	---	
Chlorobenzene	0.005	ND<0.005	---	---	---	
1,2-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,3-Dichlorobenzene	0.005	ND<0.005	---	---	---	
1,4-Dichlorobenzene	0.005	ND<0.005	---	---	---	
Ethyl benzene	0.005	ND<0.005	---	---	---	
Toluene	0.005	ND<0.005	---	---	---	
Xylenes (Dimethyl benzene)	0.005	ND<0.005	---	---	---	

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

ANALYTICAL RESULTS SUMMARY  
Aromatic Volatile Organics  
SW Method 8020

ES Job No. 56394  
Client                       
Project AF Plant 42  
Client No.                       
Laboratory Supervisor Approval:                     

Lab Sample No. 36762-11 Spike  
Field Sample No. 3-ERA7-SB4-SS8-20-170  
Date Collected 4-29-86  
Date Received 5-1-86  
Date Analyzed 5-18-86  
QC Report No. 8020-25

Sample Matrix:                     

       water (ug/L)

  X   Soil (ug/g)

       Other                     

Dilution Factor N/A

\*Moisture                      %

Spike Source                     

Compound	Concentration			Retention Time		Notes
	Det Lim	Column 1	Column 2	Column 1	Column 2	
Benzene	0.005	0.034	---	2.5	---	
Chlorobenzene	0.005	0.032	---	7.8	---	
1,2-Dichlorobenzene	0.005	0.031	---	14.3	---	
1,3-Dichlorobenzene	0.005	0.031	---	12.8	---	
1,4-Dichlorobenzene	0.005	0.029	---	12.7	---	
Ethyl benzene	0.005	0.033	---	7.3	---	
Toluene	0.005	0.035	---	4.8	---	
Xylenes (Dimethyl benzene)	0.005	---	---	---	---	

END

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